

PARAPSYCHOLOGY

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PREFACE

As the Utrecht Conference suggested, we are adopting the German terminology and using the word 'parapsychology' instead of the term 'metapsychics' proposed by Charles Richet half a century ago. Nevertheless we shall, out of respect for this great and intrepid research worker, use as well the original word which has given its name, in France, to so much valuable work, and which was so felicitously coined. The prefix *meta* had a bad reputation; according to some it suggested a little too strongly the perilous speculations of metaphysics. However, in Greek, *meta* has two principal meanings which are by no means disreputable: that of 'change', as in 'metamorphosis', and that of 'coming after', exactly as in 'metaphysics', by which Aristotle meant the successor to his natural sciences. *Para* means 'alongside', which avoids the implication of precedence and at the same time that of superiority. But what does the pettifogging of etymology matter? Custom is everything. And we are not responsible for the misuse that has been made of Richet's term by so many ignorant and ill-disposed persons. His caution satisfies us.

This treatise is a successor to our 'Introduction' which came out thirty years ago and is out of print, and has borrowed much from it, first of all in its arrangement and scientific outlook. The extremely favourable opinions which were called forth from scientists and thinkers of note by this first book confirmed our attempt at clarifying a subject obscured by mysticism and superstition. Therefore we have had of necessity to retain the same arrangement and a large part of the original interpretations, at least the main one. But after this lengthy transposition of material it became necessary to weed out the contents and to add to them new facts and points of view. The new facts are not particularly important for the advancement of our science, as they only confirm the old findings in the field of telepathy and clairvoyance, which is the only part of the subject that still interests the British. But they are of great importance in gaining acceptance for these results among scientists who, circumscribed by their trained attitude of mind, place hardly any confidence except in experiments which are repeatable at will in a laboratory.

The statistical method which Rhine applied to the guessing of playing cards is of a kind to reassure them, the more so as these long

sequences of guesses allow of no dramatic or emotional accompaniments. In this way the American research worker has rendered an immense service to this deprecated science. It is true that quarrels have been picked with him over the application of statistical theory; but the criticism was primarily aimed at the mathematical conception of chance, and could be extended to include all those who apply probability theory. If we accept the statistical laws of our time there is no more to be said; Rhine has used them sensibly and under the guidance of experts. Where one might find fault with him is in the ease with which he accepts a fact as established by an average differing little from chance. It is a matter of degree; certainty is not established by a slight deviation from expectation. Decimals have never convinced anyone; doubt arises when the figures disagree with common sense.

That is why scepticism will continue about 'psychokinesis', which is claimed to have been established by an experimental apparatus much too complex in spite of its apparent simplicity, as for example the mechanical throwing of dice. Telekinesis has been demonstrated a thousand times, to the sense of sight rather than to subtle intellectual reasoning, and above all with the advantage of showing plainly the mechanism of action at a distance. But it appears that this is out of date. Just as in physics the atom is now only a system of equations, so psychical research must today be justified by probability theory. This mistrust of sensory experience is even more intolerant in the region of physical phenomena, because this suits the British prejudice. Our friends were enthusiastic from the first about psychical research, because it promised to provide a foundation for morality and religion. They have taken much further than ourselves the study of clairvoyance and mediumistic personalities. On the other hand they have always rejected physical phenomena which do not accord so well with the religious needs of their nation. God knows how they discouraged all the great mediums who were brought to them from the Continent! They subjected them to precautions as irritating as they were useless; they created around them a sterilizing atmosphere, and they were perpetually 'exposing' them, as they called it, that is to say revealing the fraud which was always assumed.

This state of mind has not changed at all and now even the Americans' innocuous grapeshot is beginning to stir them. In France and on the Continent, where we have no such bias, there is a

large and impressive array of scientists who have recognized physical phenomena. And it is with the same equanimity that we have retained in this work the magnificent legacy of several generations of perspicacious and trustworthy observers. If at times question marks occur, I have not tried to suppress them to give an arbitrary decision on the facts of telekinesis. I have observed them sufficiently myself to be willing to be sceptical about the evidence of others. In any case, from the philosophical point of view, these facts are not incompatible with the rest of experience; they can even be made to form part of a quite acceptable psychobiological system.

An important development since the war is the notice which is being taken of our science by psychiatrists and psychoanalysts. The resistance in their camp was once great. But these experts in mental processes have come to notice, in the innumerable questionnaires that they present to their clients, certain coincidences too numerous to be attributed to chance. Thus we have acquired valuable collaborators. Since the days of Pierre Janet's polite mockery and the open hostility of Babinski and Dupré, light has filtered into the mental clinics. At Utrecht the mental physicians were present in impressive numbers; no one complained of their having arrived at the eleventh hour for they have sufficiently caught up with us.

We must regretfully admit that they came from all countries except France. The attitude of the scholars in French universities is scandalous. No doubt many of them are convinced or at least exercised, but they are ashamed to say so. Their support will come suddenly, in consequence of the phenomenon of collective psychology to which Panurge has given his name. We look for the first French Academician who will throw overboard his shocking complex of 'What shall we say?' Perhaps we shall wait a long time, but science is patient because it is eternal. Objective truth, even if it does not conform to the current standards of acceptability, invariably forces recognition in the end. It is in science that heretics have had their most triumphant revenge. But as the poor great Lamarck observed, it is often more difficult to gain recognition for truth than it is to discover it.

There are already certain indications that our opponents do not diagnose an interest in our subject as a sign of feeble-mindedness. On the contrary, as we have just said, the psychiatrists come to ask our advice about experiments. They had been told that we spent our

time in a dark cabinet interrogating spirits. And they were astonished to hear us say that spirits do not exist because if they did it would have been known long since. This expression of disbelief in spiritism, which we first made thirty years ago and which earned us so many fanatical attacks, has been renewed in this book with the calm assurance which this long period of maturity has given. The spirits have provided no new proof of their existence, and the Myers group in Britain has faded away, leaving its adherents in disorder. We do not prevent anyone from believing in survival; it is a very consoling doctrine and a very inoffensive one so long as one does not try to enter into communication with the departed. But there is no need to try to transfer it from the sphere of morality to that of science. To prove the existence of spirit is quite sufficient undertaking in itself for a human science. Let anything further be left to religion, lest intellectual arguments become confused with those of sentiment.

The characteristics which we most hope this book, like its predecessors, will be found to possess, are a constant guard against the intervention of emotion, and a sincere attempt to comply with the demands of science. It was of course paradoxical, or rather hazardous, to make use of human intelligence to present facts of which the explanation hardly lies within its province. As Bergson often said, 'Our intelligence, as nature has made it, is principally designed to deal with inanimate matter'. Hence its astonishment and, we would add, its helplessness, when it has to deal with the living. Life can be described but not understood. The great mistake made by laboratory biologists is to take their descriptions for explanations. When they encounter the irreducible indefinable in their analysis, they are not always so honest as Claude Bernard who at least ascribed it to a 'guiding force'. They consider it a negligible quantity, since quantity is the only thing that interests them.

Just the same, the great error of the psychical researchers is to believe that the occurrences they study are due to a 'super-intelligence', as Bersot used to say, and that they give flashes of insight into the heights of development to which the human race is destined. The fact that many of the individuals who produce these effects are very ordinary people, sometimes very inferior or mentally retarded, should put us on our guard against this kind of rashness. That Christ promised the Kingdom of Heaven to the poor in spirit,

and that he and his disciples performed miracles closely related to the phenomena of psychical research, is not sufficient foundation for believing that this disconcerting science heralds an evolution of the human race towards a spiritual state permanently productive of miracles.

These phenomena are certainly transcendent in the fullest sense of the word, but they are not more so than the humblest phenomena of life, and this is what we should like to convey to our colleagues in research even more than to the scholars of all other subjects. Together with my friend William Mackenzie I attempted to do this at the Utrecht Conference, in two papers which, starting from different premisses, arrived at the same conclusion. If it is to become integrated into the scheme of scientific knowledge, we would suggest that parapsychology should retrace its steps and turn back to first principles. One sees material in the whole of nature, animal and vegetable, where the marvellous, in the form of organs and instincts, is to be found at every step. It is doubtful if we were understood by minds so unprepared for an approach which omitted all reference to statistical calculations; and a French report even forgot to mention it.

However it seems to us that at a time when psychical research has abandoned all ambitions but that of proving its existence to the incredulous, this is the only approach which can be recommended to gain its scientific franchise. To find its points of contact with other sciences, to multiply and enlarge them is our most urgent need, and it is with this suggestion that we shall close this book. Some authors have said that quantitative parapsychology was going to bring us out of the prescientific stage into the scientific. Perhaps for those who worship numerical quantities. But as soon as one wishes to penetrate further, science is primarily concerned with qualities. The sensory exercise which found its perfection in the measuring-rule may have enabled us to enumerate the galaxies and liberate atomic energy, but it has not revealed to us the secrets of the construction of a blade of grass. This remark is doubtless banal, but it must be often repeated to prevent the scientists indulging too freely in the sin of pride. Professor Price of Oxford declared at Utrecht that parapsychology still needed a framework in which its strange phenomena could be arranged so as to appear less astonishing, and he was pleased to say that it was the philosophers' business to find one. We can reply to him that this framework already exists.

Instead of seeking it in books of abstract speculation or all too human metaphysics, we have only to open the book of nature — for parapsychology is simply a natural science.

PART ONE
HISTORY AND GENERAL
FEATURES

CHAPTER I

HISTORICAL SURVEY

I. THE SUPERNATURAL IN ANCIENT TIMES AND AMONG PRIMITIVE PEOPLES

1 The facts that modern science has classified under the name of metapsychics or, as it is called today, parapsychology, are drawn from the field of superstition. They can be traced back to the most ancient times. Stories of divination, clairvoyance, levitations, apparitions, haunts, possessions, and miraculous cures are found from the beginning of recorded history. This discredits them in the eyes of those who oppose these phenomena on principle, but to impartial minds it is in their favour, because there is agreement between the ancient traditions and modern observations of experiments many times repeated. Stripped of the more or less legendary circumstances which surround them and reduced to basic essentials, they show striking analogies and fall into groups like so many other natural phenomena.

Further evidence of this close family relationship is found in the stories of travellers and missionaries who live in contact with primitive peoples. The phenomena observed, some under good control, present the same features. It is impossible to summarize the enormous literature on this subject. Enterprising psychologists and scholars have undertaken to classify all these facts, in particular the facts of possession which give rise to almost all the stories. We will mention first of all the richly documented work of Professor Oesterreich, *Die Besessenheit*,¹ in which he has studied demoniacal possession among primitives, in ancient times, in the Middle Ages and in modern civilization. There also come to mind, *L'histoire du spiritualisme expérimental* by César de Vesme,² our own *Personnages d'au-delà*,³ and Eric Dingwall's book, *Ghosts and Spirits in the*

¹ Langensalza, Wendt, 1921.

² Éditions Meyer, Paris, 1928.

³ Éditions Denoël, Paris, 1946.

Ancient World.¹ At the international Utrecht Conference in 1954, at which a serious attempt was made to purge parapsychology of its mystical and emotional elements, the latter author recalled that phenomena had been reported in all ages, among all races and in nearly the same terms, while the interpretations of them had varied according to the environment and the era. Therefore the critical works mentioned form the best introduction to the history of our subject.

II. ANIMAL MAGNETISM: MESMER (1779)

2 *The Universal Fluid*

Surveying the centuries, we take as our starting-point the experimental period of metapsychics which, by an ironical coincidence, began when the sceptical ideas disseminated by Voltaire and the Encyclopaedists were at their peak. To do justice to Mesmer, he was a great pioneer, notwithstanding the bogus trappings which surrounded him and which have discredited him for ever in the eyes of scholars. We owe to him a discovery, that of 'animal magnetism', which, by turns affirmed and denied during the first half of the last century, and unanimously abandoned in the second, promises to be confirmed and enlarged by our contemporaries.²

Mesmer was a doctor. Thus it was a remedy that he claimed to have found: a remedy invisible and imponderable, but of great efficacy and capable of curing all diseases. Just before the Revolution, the tide of theories concerning the nature of electric fluid and the emanations or magnetic fluid of magnets, was at its height. Some thought that this magnetic fluid had curative properties. Mesmer maintained³ that there existed an animal magnetism distinct from physical magnetism; but he combined with this some curious ideas drawn from his astrological studies in Vienna. In the memoir which he published in 1779, he put forward the theory that there is 'a mutual influence between the celestial bodies, the earth, and animate bodies'. This influence is subject to the laws of mechanics. It acts by

¹ London, 1930.

² For a critical history of animal magnetism see the excellent book by Binet and Féré, *Le magnétisme animal*, Alcan, Paris, 1887.

³ *Mémoire sur la découverte du magnétisme animal*, Didot, Paris, 1779. Definitive edition, Ricard, 1846: *Mémoires et aphorismes*, Baillière, Paris. See also a new edition of Mesmer (1798); cf. d'Eslon, *Observations sur le magnétisme animal*, Didot, Paris, 1780.

means of a fluid of universal extension which filters into the nerve-substance and gives the human body properties analogous to those of a magnet. By directing this fluid according to a certain method, it is possible to 'cure the diseases of the nerves directly and indirectly other diseases'. Mesmer asserted that the art of medicine would thus reach its final perfection.

The way in which he applied his theories is well-known. His famous tub, from which protruded iron rods, was set up in the middle of a dimly lighted room. The patients crowded round it, those in the front row touching the rods and the others in contact with them by holding hands or by moistened cords. The thaumaturgist, in a delicately coloured silk robe, an iron wand in his hand, walked round majestically, accompanied by young and good-looking assistants. Various tunes were played on a piano. Few patients remained unresponsive. Almost all exhibited symptoms which began with tingling and coughing and ended in extremely contagious convulsions, especially among the women. The treatment could be continued individually by touches and passes.

3 *Fluid or Imagination?*

At the express command of the King two commissions were set up in 1784 to study these phenomena which were the rage of Paris. The first consisted of members of the Academy of Science and of the Faculty of Medicine, Franklin and Lavoisier among them. The experiments, more or less well conducted, showed that the fluid did not act if the subjects did not know they were being magnetized. Therefore the commission concluded, in the words of its spokesman, the astronomer Bailly, 'that the animal magnetic fluid cannot be perceived by any of our senses, and had no action, neither upon themselves, nor on the patients that they had exposed to it'. In their view, the observed effects were mainly due to imagination.

A second commission, set up by the Academy of Medicine, arrived at the same conclusion.¹ However, one of its members, the botanist Laurent de Jussieu, refused to add his signature. This penetrating observer had noticed that a blind woman in the tub séances reacted to a wand pointed at her stomach. He deduced from this the existence of a medium 'which travels from one person to

¹ Bailly, *Report of the commissioners of the Faculty of Medicine and the Academy of Science*, *Report of the commissioners of the Royal Society of Medicine*.

another producing an observable effect'.¹ Thus from the very beginning of animal magnetism conflict arose between the 'fluidists' or supporters of the fluid theory, and the 'animists' or supporters of imagination. This conflict persisted throughout the nineteenth century and is still alive. It is, indeed, healing by imagination which reappears in 'the faith which heals' of Charcot, in the American 'mind cure', in Bernheim's suggestion and in modern psychotherapy. To this school of thought is directly opposed the Mesmerian theory of a material fluid, communicable to animate or inanimate bodies. But the two are not mutually exclusive and several psychical researchers have tried to rehabilitate Mesmer and Laurent de Jussieu without discrediting the experts of 1784.

4 *Experimental Somnambulism*

Although Mesmer's patients showed the characteristic phenomena that have since been observed with hysterics, that is to say anaesthesia, convulsions, ecstasy, etc., they exhibited no supernormal faculties properly speaking. These first made their appearance when, in the year Mesmer was officially condemned, one of his pupils, the Marquis de Puységur, was trying to magnetize some peasants on his estate at Busancy, in Champagne. First he noticed an astonishing phenomenon. A young countryman of twenty-three fell into a strange sleep during which he talked, laughed and went about his business with greater intelligence than in the waking state. He even gave an exact description of his own illness and suggested the remedies that cured him. M. de Puységur had discovered artificially induced somnambulism. Not only did patients become their own doctors in this way, but subjects read the magnetizer's thoughts, found hidden objects and even predicted the future.² Emulators of Puységur added to the nomenclature of psychical research what Sollier called some years ago *autoscopy*, that is, seeing one's own internal organs and transposition of the senses. For example, one subject heard with his stomach and saw with the ends of his fingers. These wonderful phenomena were ascribed to animal magnetism, which was still known by the same name, although Puységur

¹ de Jussieu, *Report of one of the commissioners*, Paris, 1784.

² Puységur, *Mémoires pour servir à l'étude du magnétisme animal*, Dentu, Paris, 1784; *Du magnétisme animal considéré dans ses rapports avec diverses branches de la physique*, Dentu, Paris, 1807; *Recherches, expériences et observations physiologiques sur l'homme dans l'état de somnambulisme naturel et dans le somnambulisme provoqué par l'acte magnétique*, Dentu, Paris, 1811.

considered the fluid to be more nearly of an electrical nature. It was not until 1822 that the equivalence of magnetism and electricity was demonstrated by Ampère.

The enthusiasm excited by the discovery of waking somnambulism was extraordinary, and the First Empire saw innumerable magnetic circles spring up, as did later the spiritist circles. The attraction of the marvellous was always the mainspring of this movement, but to unprepared minds the facts could well appear supernatural. In 1825 the state of public opinion was such that the Academy of Medicine was obliged to pronounce judgement. At the request of Dr Foissac it set up a commission which, in its report drawn up by Dr Husson, chief physician of the Hôtel-Dieu, stated that the findings of 1784 were vitiated by the prejudice and negligence of the commissioners, and that they had since been invalidated 'by careful and trustworthy observers'. Another commission carried out experiments for five years. The report, composed by Dr Husson and read by him in 1831,¹ was favourable. It indicated that the effects were negligible or non-existent in most cases, and that in some they were produced by boredom and imagination. But it recognized that certain physiological and therapeutic phenomena were dependent solely on magnetism and could not be produced without it. The phenomena of somnambulism had been completely confirmed: sleep, anaesthesia, submission to the magnetizer's will, improved memory, amnesia on awakening, seeing with closed eyes, and prevision of future events. Although the members of the commission had observed no phenomena more extraordinary, they declared at the end of the report that the facts accepted were sufficiently important to enable them to conclude 'that the Academy should encourage research into magnetism as a very curious branch of psychology and natural science'. Great official organizations are less enterprising than individuals: Husson and his colleagues were reproached for having allowed the sensational too large a place in their enquiry, and the Academy refused to have the report printed.²

¹ Foissac, *Rapport et discussions de l'Académie de médecine sur le magnétisme animal*, Baillière, Paris, 1833.

² For the history of animal magnetism see: Thouret, *Recherches et doutes sur le magnétisme animal*, Paris, 1784; Deleuze, *Histoire critique du magnétisme animal*, Belin Leprieux, Paris, 1813; Deleuze, *Mémoire sur la faculté de prévision*, accompanied by supporting documents collected by M. Mialle, Crochard, Paris, 1836; Billot, *Recherches physiologiques* on the cause of the extraordinary phenomena observed among modern clairvoyants, wrongly called magnetic somnambulists, or Correspondence on vital magnetism between M. Deleuze and a recluse, Paris, 1839; Faria, *De la*

5 *Decline of Magnetism*

However, the magnetizers continued to produce their marvels. One of them, Dr Berna, succeeded in obtaining from the Academy of Medicine a new commission to observe that operations could be carried out painlessly in the magnetic sleep. The report, drawn up by Dubois and d'Amiens, concluded that there was a condition called the state of magnetic somnambulism. The facts were distorted by the prejudice of the observers. Doubt was thrown on the loss and regaining of consciousness, as well as the fact of obedience to a mental command, the transposition of the sense of sight, and clairvoyance. What imprudence on the part of scholars who had only seen two somnambulists! But emotion triumphed over scientific integrity.

There was still another incident. Dr Burdin, one of the signatories of the Husson report, had left as a legacy a sum of 3,000 francs for any magnetizer who could produce a subject able to read without using his eyes. Dr Pigeaire presented his young daughter who possessed this gift. But when the investigators changed the conditions of the test, she failed, and the Burdin prize was not awarded. Finally, tired of challenges and controversy, the Academy decided, in 1840, on the proposal of M. Double, to pay no more attention to magnetism and its frauds.

This contemptuous decree lacked the support of the ecclesiastical authorities. The clergy were intensely interested in these exciting controversies. In 1846, Lacordaire had, from the height of the bishop's throne at Notre-Dame, attested the existence of the phenomena of magnetism, which he ascribed to 'a last glimmer of the Adamic power, destined to confound human reason and to humble it before God'. An encyclical was sent out to place bishops on their guard against these practices. The Holy Office saw nothing diabolical in them, but thought it wrong that 'purely physical laws and procedures should be applied to genuinely supernatural happenings in order to explain them in physical terms'. Condemned by science and religion, magnetism had no chance of reprieve. Thus, in spite of the efforts of Baron Du Potet and Lafontaine, in spite of the works of reliable

cause du sommeil lucide, Paris, 1819; Bertrand, *Traité du somnambulisme et des différentes modifications qu'il présente*, Paris, 1823; Bertrand, *Du magnétisme animal en France*, including remarks on the occurrence of ecstasy in magnetic treatments, Paris, 1826; C. Chardel, *Esquisse de la nature humaine expliquée par le magnétisme animal*, Denu, Paris, 1826.

doctors like Charpignon and Teste,¹ in spite of the exploits of somnambulists such as Alexis Didier,² Mlle Pigeaire and Mme Lenormand, it fell into disrepute. Henceforth the magnetizers were considered as charlatans and their subjects as abandoned to the exploitation of public credulity.

6 *Magnetism in Germany*

In England, animal magnetism had little success, in spite of the visits of the French magnetizers Du Potet and Lafontaine. But in Germany it found a soil prepared by philosophy. Kant believed in clairvoyance and in his *Dreams of a Believer* (1766), he had reported Swedenborg's cases of clairvoyance: the fire at Stockholm, Queen Ulrica, Mme de Morteville. 'Life does not depend on the body,' he said, 'but on an element distinct from the body.' Goethe was very interested in the occult.³ Jean-Paul Richter, Schelling and Hegel had reacted against British positivism and French hedonism. Thus they were better disposed on the other side of the Rhine to take notice of the extraordinary facts which occurred in somnambulism. Dr Kluge and Dr Wollfart⁴ published in 1815-16 some cases of reading by means of the stomach and of action at a distance. Eschenmayer⁵ founded the Archives of animal magnetism, and his collaborator Kieser, an alienist and professor at Jena University, sketched a theory of these phenomena. In 1820, the Academy of Berlin put before the meeting 'an exposition of these facts which strips them of all supernatural implications by showing that they obey certain laws, like all other phenomena, and are by no means isolated or dis-

¹ du Potet, *Cours de magnétisme en sept leçons*, Baillière, Paris, 1840; J. Charpignon, *Physiologie, médecine et métaphysique du magnétisme animal*, Baillière, Paris, 1848; Teste, *Manuel pratique de magnétisme animal*, Baillière, Paris, 1843; A. Teste, *Les confessions d'un magnétiseur*, Garnier, Paris, 1848; Lafontaine, *L'art de magnétiser*, or animal magnetism considered from theoretical, practical and therapeutic stand-points, Baillière, Paris, 1847; Baragnon, *Etude du magnétisme animal sous le point de vue d'une exacte pratique*, followed by an historical survey of magnetism and an appendix on table-turning, Baillière, Paris, 1853.

² Marcillet, *Le sommeil magnétique expliqué par le somnambule Alexis Didier en état de lucidité*, Dentu, Paris, 1856; A. Cahagnet, *Arcanes de la vie future dévoilés*, 2 vol. Cf. Paris, 1848-49; T. Cahagnet, *Lettres odiques-magnétiques*, Baillière, Paris; Brierre de Boismont, *Des hallucinations*, a critical account of apparitions, visions, dreams, ecstasy, magnetism and somnambulism, G. Baillière, Paris, 1845.

³ Max Seeling, *Goethe als Okkultist*, J. Baum, Berlin, 1920.

⁴ Wollfart, *Der Magnetismus*, Nicolai, Berlin, 1816.

⁵ Eschenmayer, *Versuch die scheinbare Magie des thierischen Magnetismus zu erklären*, Cotta, Tübingen, 1816.

connected from the other phenomena of animate beings'. This gave General Noizet the opportunity to write his famous memoir on somnambulism and animal magnetism, which was not published until forty-four years later.¹

A remarkable somnambulist, Frederica Hauffe, allowed Dr Kerner, who studied her for three years, from 1826 to 1829, to write an essay which created a tremendous impression in Germany: *The Seeress of Prevorst*.² From her childhood, Frederica saw apparitions which generally informed her of tragedies and produced physical effects attested by a number of witnesses, in particular by David F. Strauss, the chronicler of the life of Christ. It was spiritism occurring twenty years before its advent. Frederica possessed also all the faculties of somnambulists to their highest degree: she carried out 'journeys' in spirit, she saw the future in mirrors and soap bubbles, she could see the outlines of magnetic passes, she read with the pit of her stomach, and recognized minerals by the 'fluid' which they gave out.

This last faculty was thoroughly studied later (1845) by the Austrian Baron Reichenbach. Under Berzelius's patronage, he published a series of memoirs on the phenomena of luminosity perceptible to sensitives which were produced by magnets, crystals and the human body.³ Colonel de Rochas introduced his work into France and continued it.⁴

Finally Schopenhauer took an enthusiastic interest in these phenomena which supported his philosophy of the will-to-live. He published three papers, of which one was included in *The Will in Nature*.⁵

¹ Noizet, 'Mémoire sur le somnambulisme et le magnétisme animal', read to the Royal Academy of Berlin in 1820, Plon, Paris, 1864.

² Kerner, *Die Seherin von Prevorst*, Cotta, Stuttgart, 1829; cf. also Passavant, *Untersuchungen über den Lebensmagnetismus und das Hellsehen*, Bronner, Frankfurt, 1821; Kerner, *Geschichte zweier Somnambule*, Braun, Carlsruhe, 1824.

³ Reichenbach, *Physikalische-physiologische Untersuchungen*, Vieweg, Braunschweig, 1845; Reichenbach, *Der sensitive Mensch und sein Verhalten zum Od*, Cotta, Stuttgart, 1855; Reichenbach, *Odisch-magnetische Briefe*, Cotta, Stuttgart, 1856; Reichenbach, *Aphorismen über Sensitivität und Od*, Braumüller, Vienna, 1867.

⁴ A. de Rochas, *Le fluide des magnétiseurs*, a summary of the experiments of Baron Reichenbach in its physical and physiological properties. Carré, Paris, 1891.

⁵ Schopenhauer, *Animalischer Magnetismus und Magie*, (Ueber den Willen in der Natur), Ed. Frauenstadt, Brockhaus, Leipzig, 1836; Schopenhauer, (1) 'Transcendente Spekulation über die anscheinende Abschlüchtheit im Schicksale des Einzelnen';

(2) 'Versuch über Geistersehen und was damit zusammenhängt.' *Parerga und Paralipomena*, Ed. Frauenstadt, Leipzig, 1851.

III. HYPNOTISM: BRAID (1841) ✓7 *Braidism*

While the researches of Reichenbach seemed to confirm Mesmer's theory, an important discovery by James Braid, a doctor in Manchester, came to side with the supporters of the imagination theory and settle, finally as they thought, the dispute between the fluidists and the animists. In 1841 Braid, trying to reproduce the experiments of the magnetizer Lafontaine, convinced himself that, if the subject could no longer open his eyes and went to sleep when stared at, it was simply because of fatigue. The same result was obtained by the subject staring at a bright object. This new way of producing 'nervous sleep' was nearly always successful with adults, children and even animals. But success was most frequent with the subjects who had the greatest power of concentration. The sleep obtained was identical with that which resulted from the passes and fixed gaze of the magnetizer, that is to say it showed all the stages from the lightest dissociation up to catalepsy involving loss of sensation.

Secondly, Braid found that during the hypnotic sleep the subject expressed an emotion corresponding to the attitude that he was made to take up. Finally he ascertained that the sleeper could obey any order 'coming from a person in whom he had confidence'. By this last observation Braid returned to the support of the abbé Faria and Bertrand, who attributed all the effects of mesmerism to imagination. From this point of view the value of his discovery would be secondary; but whatever Pierre Janet's opinion of it, its importance is still great if considered, not as a theory of suggestion, but as a theory of hypnotism, that is to say, of the existence of a specialized mental state, common to magnetism, somnambulism and suggestibility. Although denying the supernatural phenomena reported by the magnetizers, Braid nevertheless observed some inexplicable happenings which he ascribed to 'a heightening of mental functions or powers' and which, like their predecessors, belong to metapsychics.¹

This separation of hypnotism from suggestion was brilliantly

¹ J. Braid, *Neurhypnology*, or the rationale of nervous sleep considered in relation with animal magnetism, Churchill, London, 1843; J. Braid, *The Power of the Mind over the Body*, an experimental enquiry into the nature and cause of the phenomena attributed by Baron Reichenbach and others to a new imponderable, Churchill, London, 1846.

analysed by Durand de Gros, who called Braidism proper *hypotaxy*, and suggestion *ideoplasty*. It has been left for our contemporaries to do justice to this unrecognized innovator. Durand de Gros was able to show that mesmerism, hypnotism and suggestion were three distinct processes, and that any physical impression could be replaced by a mental one. Finally he was the first to demonstrate the division of the personality, and human and animal multiple personality.¹

8 *Richet and Hypnotism*

Braidism had no success in France and England. It was Charcot who revived it, but without recognizing it. However, isolated observers confirmed its truth. For example Dr Azam, in 1859, having repeated Braid's experiments on hysterical patients, noted the agreement of physical attitude with emotional state, and hyperaesthesia of the senses: the ticking of a watch was heard at a distance of 8 or 9 metres, and the warmth of a hand was felt 40 centimetres from the back.² Otherwise, Braid's ideas were considered too mystical and hypnotism was only applied to surgical practice. Finally it was completely abandoned, as animal magnetism had been, and fell into the hands of charlatans. When Czermak in Austria and Preyer in Germany proved that it was possible to hypnotize animals — hens, rabbits, frogs, crayfish³ — most of the doctors and physiologists in France saw only fraud in the phenomena of hypnotism.

It was to Charles Richet's credit that he exposed the weakness of such an accusation. In 1875 while still a student, he published a paper on induced somnambulism in which, while rejecting mesmerism, he stated that the hypnotic sleep was a natural physiological state in which intelligence was often heightened. In a series of articles he reviewed the assessment of the early magnetizers, and became the leader in France of the great movement to rehabilitate psychical research.⁴

¹ Durand de Gros (Dr Philips), *Electrodynamisme vital*, or the physiological relations of mind and matter shown by new experiments and a critical study of the nervous system, Baillière, Paris, 1855; Durand de Gros, Dr Philips, *Cours théorique et pratique de braidisme*, or hypnotism considered in relation to psychology, pathology, and its applications to medicine, surgery, forensic medicine and education, Baillière, Paris, 1860.

² Azam, *L'hypnotisme et le dédoublement de la personnalité*, Baillière, Paris, 1887; New edn. Alcan, Paris, 1892.

³ Preyer, *Die Entdeckung des Hypnotismus*, Pactel, Berlin, 1881.

⁴ Ch. Richet, *L'homme et l'intelligence*, Alcan, Paris, 1883.

9 *The Conflict of the Two Schools*

Charcot, already famous for his researches on the nervous system, and especially the spinal cord, undertook a methodical study of hypnotism. He attempted to give an exact description of its physical symptoms, such as muscular contractions. In this way he stated his famous law of the three characteristic states of 'major hypnotism': the lethargic state, the cataleptic state, and the somnambulistic state. 'Minor hypnotism' showed only mental effects. Charcot's communication to the Academy of Science, dated 1882,¹ was the signal for numerous experimenters in France and England to start work. Everywhere the three states were easily reproduced. However, attentive observers distinguished intermediate states, of which the number continued to increase until it was realized that an unlimited number could be found.

In 1884 Dr Bernheim, a Professor of the Faculty of Medicine at Nancy, published a monograph² in which he revived the theories which had been suggested in the days of animal magnetism by the abbé Faria, Bertrand and Noizet, and had been applied therapeutically in 1886 by another Nancian, Dr Liebeault.³ These theories explained hypnotic sleep by the power of suggestion. Bernheim proclaimed the presence in man of 'a natural inclination for an idea to give rise to an act more or less rapidly'. Hypnotism, like somnambulism, was nothing but a suggestion accepted by the mind. On this theory it would be as frequent with normal subjects as with hysterics, with men as with women, and its frequency of occurrence would be greater than was thought. Bernheim's collaborators, Liégeois and Beaunis,⁴ developed this idea without completely agreeing with him, and their combined efforts destroyed Charcot's theory after a conflict which lasted for some years. They maintained that the hypnotic sleep was not a form of hysteria, and was as natural physiologically as normal sleep. Finally they established that the three states were only phenomena created by suggestion, and that the hypnotism of the Salpêtrière was only a 'cultural hypnotism' derived from the tradition of the magnetizers.

¹ Charcot, *Essai d'une distinction nosographique des divers états compris sous le nom d'hypnotisme*, 1822.

² Bernheim, *De la suggestion dans l'état hypnotique et à l'état de veille*, Paris, 1884; New edn. 1886; Bernheim, *Automatisme et suggestion*, Alcan, Paris, 1890.

³ Liebeault, *Le sommeil et les états analogues*, considered primarily from the point of view of the action of mind on matter.

⁴ H. Beaunis, *Le somnambulisme provoqué*, Baillière, Paris, 1886.

10 *Psychological Automatism*

From this time the search for a physiological foundation for the hypnotic state was given up; it was now considered only from the psychological point of view. Pierre Janet, who is allied in this respect to the Richet school, applied himself to the study of suggestion not as idea, but as action, and he showed the incomplete character of the actions suggested.¹ Unadapted to the total experience of the subject, they show an automatic and even unconscious character, when the subject does not realise, even at the time of carrying them out, that he is doing so. They also show all the characteristics of compulsions. At the same time, Janet showed that the phenomena of suggestion are independent of the hypnotic state, for 'suggestibility can be quite complete without connection with artificial somnambulism, and can be totally absent in a state of complete somnambulism; in brief its variations do not occur at the same time and in the same way as those of this state'. As for hypnotism, he defined it as: 'a temporary alteration of the mental state of an individual, artificially induced by another person and sufficient to bring about dissociations of personal memory'. He admitted that hypnotism is one of the symptoms of hysterical neurosis. This observation had already been made by the early magnetizers. But fatigue, emotion and poisoning can produce a lowering of psychological tension and disintegration of consciousness.²

11 *The Subconscious and 'Ideoplasty'*

In this brief study of hypnotism, we have still to mention two names which will recur when we come to the period of psychical research proper: Myers and Ochorowicz. Giving great scope to the theory of the unconscious life of the mind, Myers expressed the opinion that 'a current of consciousness flows round us, below the threshold of ordinary life, and this consciousness includes unknown powers of which hypnotic phenomena give us an elementary

¹ P. Janet, *L'automatisme psychologique*, essay on the experimental psychology of the lower forms of mental activity, Alcan, Paris, 1889.

² P. Janet, *L'état mental des hystériques*, 2 vol. Rueff, Paris, 1891-94; P. Janet, *Névroses et idées fixes*, I. Experimental observations on disturbances of the will, attention, memory and emotions, and on the treatment of obsessions; P. Janet, *Les névroses*, Flammarion, Paris, 1909; P. Janet, *Les méditations psychologiques*, 3 vol. Alcan, Paris, 1912.

example'. He considered superior those phenomena which Janet declared to be pathological and inferior; putting forward the idea that 'automatism is not simply a regression, but an advance, and hysteria borders on genius'.¹

Ochorowicz contested Bernheim's statement that no one can be put to sleep against his will. He established the existence of the 'hypnotic susceptibility', and showed that if this is high enough, a person can be hypnotized against his inclination and even without his knowledge. He finally developed with great energy the theory of 'ideoplasty', that is to say the power of an idea fixed in the mind while the higher tendencies are weakened.²

A notable psychologist, Alfred Binet, laid great emphasis on the effects of this type of suggestion. He thought he was 'almost justified in saying that suggestion can make anything happen'. He studied in particular hallucinations, movements and actions, and paralysis of sensibility and movement. In the course of this research he observed that hypnotic sleep was closely related to ordinary sleep, and that hypnotism was not adequately defined by the characteristic of automatism. In the study of changes of personality, of such great importance for psychical research, which Binet also undertook with great impartiality, he was in agreement with Myers's ideas rather than with those of Pierre Janet.³

In 1892, with Charcot's death, hypnotism began to decline. Studied exclusively by doctors and used for therapeutic purposes, it did not reveal its paranormal features, because no one wished to admit that such existed. The reaction against the magnetizers made it necessary to eliminate any suspicion of the miraculous.⁴ There were disagreements about the nature of hysteria which have not yet been resolved. Freud, developing Pierre Janet's ideas, recognized only psychological causes for this illness; he sought them in the relationship of the conscious and subconscious minds, and brilliantly developed a theory of dream-interpretation which errs only in placing too much importance upon sex.⁵ Sollier asserted that

¹ F. W. H. Myers, 'The Subliminal Consciousness', *Proc. S.P.R.* Vol. 7, Part 20; Vol. 8, Parts 22 and 23; Vol. 9, Part 24; Vol. 11, Part 29, 1892-95; F. W. H. Myers, *Human Personality and its Survival of Bodily Death*, 2 vol., Longmans, London, 1903.

² J. Ochorowicz, *De la suggestion mentale*, Doin, Paris, 1887.

³ A. Binet, *Les altérations de la personnalité*, Alcan, Paris, 1892.

⁴ But compare P. Joire, *Traité de l'hypnotisme expérimental et thérapeutique*, Vigot, Paris, 1908.

⁵ S. Freud, *Die Traumdeutung*, Deuticke, Leipzig, 1900. Also: 'Metapsychologische Ergänzung zur Traumlehre', *Zeitschrift für ärztliche Psycho-analyse*, 4, 1918.

hysteria has physiological causes in the brain. Finally Babinski originated his theory of *pithiatism* in which hysteria is only suggestion, autosuggestion, imitation or simulation. Thus, a century after animal magnetism, the psychological medicine descended from Braid found itself in a state of deadlock. Isolated research workers such as Dr Bérillon made gallant attempts to raise hypnotism from the disrepute into which it had fallen.¹

IV. SPIRITUALISM: ALLAN KARDEC (1848)

12 *Table Turning and the Spirits*

Let us go back to the parting of the ways from which we have traced the development of Braidism, to consider another branch of psychical research. The reign of animal magnetism was hardly over when a new subject of curiosity came to dominate current thought. It arrived straight from America. In 1847, in a small town called Hydesville in New York State, a certain house was the scene of strange phenomena which had already put its occupants to flight. Their place had been taken by a family named Fox, including some young girls who amused themselves by trying to solve the mystery. There were raps which sounded in the walls and furniture, and seemed to be intelligently controlled. If questions were asked aloud, answers were given by means of an improvised alphabet. The invisible rapper claimed to be the spirit of a man murdered and buried in the house; he gave the name of his murderer as well as unknown pieces of information which were subsequently verified. This spirit brought others, and the family moved to Rochester and then to New York, accompanied by its little troupe on the other side, whose members had given up shaking houses to their foundations, and now courteously consented to converse with selected persons through the mediation of a light table-foot. Thus Spiritism was born.

It spread with extraordinary rapidity. In England, under the ambiguous name of 'spiritualism', in France and in Germany, mediums were discovered in their thousands, and séances were held in every drawing-room. Tables were turned, and chairs, and hats. The language of the spirits progressed. They were no longer satisfied to answer 'yes' or 'no', or to compose sentences by making a number of raps corresponding to the position of each letter in the

¹ Dr Bérillon, *La science de l'hypnotisme*, Jouve, Paris, 1947.

alphabet. Now pencils were tied to table-legs or to simple planchettes, and they wrote for themselves. Better still, the medium held the pencil and they directed his hand. In this way they gave the most various messages, from cooking recipes to lofty reflections on the immortality of the soul and the beneficence of Providence. Joan of Arc and Napoleon graciously condescended to manifest themselves. There were solemn spirits and facetious ones; there were even obscene ones. These last were evil spirits from low spheres, which manifested themselves especially in haunted houses, such as the vicarage of Cideville, whose thrilling story, published in 1851, went round the world.¹

This 'epidemic of spirits', as the Marquis de Mirville called it in a paper which he communicated at this time to the Academy of Science, although providing entertainment for many people, stimulated others to serious moral reflections and initiated a religious movement which has continued to grow until the present day. What is the use of talking with the dead, unless one derives from it an unquestionable rule of life? The St Paul of this new religion was M. Rivail, who took the name of Allan Kardec. In 1857, at the age of fifty-four, he wrote, at the dictation of the Invisibles, *The Book of the Spirits*,² which was translated into every language and which is still the *credo* of the spiritist faith. He wrote others, in particular *The Book of the Mediums*.³ 200,000 copies of his works have been printed in French.

The moral teaching of Allan Kardec shows traces of all the romantic and humanistic phraseology of the period. As for his metaphysics, by asserting that it is possible to communicate with the 'other side', it has comforted many bereaved persons and led several unbalanced ones to a padded cell; but it has the unquestionable merit of having started an experimental movement, and having in this way smoothed the path of psychical research.

13 Chevreul's Theory

The recognized scientists, who had just withstood the assault of animal magnetism, received with no less contempt this new wave of superstition which the Atlantic ocean had brought to the shores of

¹ De Mirville, *Pneumatologie: Des esprits et de leurs manifestations diverses*, Vrayet de Sacy, Paris, 1853, 5th edn., 1863, 6 vol.

² Allan Kardec, *Le livre des esprits*, Dentu, Paris, 1857.

³ *Le livre des médiums*, Didier, Paris, 1861.

the Old World. But an explanation had to be found for tables which turned and leapt like living things. They then called to mind the explanation given by the distinguished Chevreul, a score of years before, for the movements of the 'exploring pendulum'. This pendulum consists of a weight suspended by a thread, the free end being held between the fingers. From ancient times, this has been used as a divining instrument. When it is held over a disc with the letters of the alphabet on it, the pendulum swings by itself, and indicates successively letters which, taken together, give the reply to a question put to it. His personal experience had convinced Chevreul that the subject's wishes played some part in this phenomenon. By a well thought out series of arguments, he decided there was 'a special kind of muscular movements performed without conscious awareness'. In this way the subject could work the pendulum and answer his own questions without knowing it.

On March 21, 1853, the Academy of Science became interested in two papers, one on 'The use of the divining rod in the search for underground water', the other on 'The rotary movement of tables'. These papers were submitted to the scrutiny of a commission of which Chevreul was spokesman. This gave rise to the famous book, published in the following year, in which the great chemist applied his hypothesis of small unconscious movements to three kinds of phenomena: the exploring pendulum, the divining rod and table-turning.¹ Chevreul refused to admit that 'Superintelligence', as the sceptic Bersot called it, was shown in these cases. He certainly explained how the movements of the pendulum, rod and tables were caused, but he did not explain at all why these objects should possess knowledge superior to that of the person who was unconsciously directing their movements. Once more the fear of the supernatural!

The scientific world adopted Chevreul's theory, while the general public was won over by the spiritists. Another theory slipped in between the two when, in the same year, 1854, the enthusiastic and memorable book by the Count de Gasparin was published,² in which he ascribed the turning of tables to the magnetic fluid or to some similar agent. His enthusiasm for his

¹ Chevreul, *De la baguette divinatoire, du pendule explorateur et des tables tournantes*, Mallet-Bachelier, Paris, 1854.

² A. de Gasparin, *Des tables tournantes, du surnaturel et en général des esprits*, 2 vol., Dentu, Paris, 1854.

theories blinded Chevreul to the fact that tables sometimes raised themselves when no one was touching them. Gasparin clearly established this phenomenon by sprinkling the table with flour before the experiment. He stated unequivocally: 'The nervous system of tables is not supposed to be impressionable, they are hardly likely to be carried away by their imagination; therefore, when they rise under the action of my hand which is not touching them, it is certain that they are obeying a physical force which is determined by my will'. This was an unassailable argument, but it clashed at once with scientific preconception. 'If I saw a straw moved by the action of my will,' the physicist Foucault exclaimed dramatically, 'I should be terrified. If the influence of mind upon matter does not cease at the surface of the skin, there is no safety left in the world for anyone.'

Besides this, Gasparin's demonstration made the mistake of reopening the old controversy of animal magnetism which had been closed by a final verdict from the Academies. *Res judicata!* they replied to this bold observer, and, in spite of the weighty evidence of Professor Thury of Geneva University,¹ they rejected movement without contact, while the spiritists rejoiced at the discord in the camp of the unbelievers.

14 *Spiritualism in England, America and Germany*

In the United States, the miracles of the Fox sisters, soon reproduced by other mediums, aroused a tremendous reaction. The 'spiritualists' met in 1852 in a gigantic convention at Cleveland. They petitioned the Senate to arrange a scientific investigation. The newspapers announced 'a religious and social revolution', a new era in the history of the world. Judge Edmonds, President of the Senate, revealed that he was a medium and preached the new gospel.² The phenomena became more and more wonderful. The spirits allowed themselves to be seen and even daguerrotyped. But the scientists were not so ready to believe in them. The Rev. Mahan, first President of Cleveland University, supported the theory of magnetic fluid.³ In 1856 Dr Hare, a lecturer at the University of Pennsylvania, published a series of experiments showing that objects could

¹ Thury, *Les tables tournantes, considérées au point de vue de la physique générale*, Kessmann, Geneva, 1855.

² W. Edmonds and T. Dexter, *Spiritualism*, New York, 1853; C. Rogers, *Philosophy of mysterious agents*, Boston, 1853.

³ A. Mahan, *Modern Mysteries Explained and Exposed*, Jewett, Boston, 1855.

increase in weight under the influence of spirit forces. In this he anticipated the work of Crookes.¹

In England, Daniel Dunglas Home, a remarkable medium, excited public interest on his return from America.² He not only produced all possible kinds of movement at a distance, but he materialized spirits. The great naturalist Russel Wallace, the forerunner of Darwin, was one of the first scientists to study 'the scientific aspect of the supernatural', and to give his support to spiritualism.³ His example did not convince all his colleagues in the Royal Society, but it persuaded the London Dialectical Society, under the presidency of Sir John Lubbock, to study the phenomena attributed to spirits. He also convinced William Crookes. The British National Association of Spiritualists was founded in 1873. Among its founders was the Rev. Stainton Moses who, eleven years later, established the London Spiritualist Alliance, which is today the most influential English spiritualist organization.

In Germany the first American mediums were disembarking at Bremen and Hamburg. They found public opinion prepared by the story of the Seeress of Prevorst. Dr Kerner, who continued to publish his *Prevorst Papers* in collaboration with Eschenmayer, had brought out, in 1853, a study of *Somnambulist Tables*.⁴ But learned scientific circles were slow to take notice of these phenomena. It was not until 1877 that Zöllner carried out his experiments with the medium Slade.⁵ Five years before, Aksakof had founded the *Psychische Studien*, and the belief in spiritism spread so widely that the famous follower of Schopenhauer, Eduard von Hartmann, published in 1885 a sensational little book⁶ in which he explained the phenomena of spiritism by unconscious somnambulism. Aksakof published a spirited reply,⁷ claiming to base his arguments on

¹ Hare, *Experimental Investigations of the Spirit Manifestations*, demonstrating the existence of spirits and their communication with mortals, Partridge, Philadelphia, 1855.

² D. D. Home, *Incidents of My Life*, Tinsley, London, 1863.

³ A. Russel Wallace, *The Scientific Aspect of the Supernatural*, Farrar, London, 1866.

⁴ J. Kerner, *Die somnambulen Tische*, Ebner Stuttgart, 1853, Ed. Freimark, Baum, Pfullingen, 1922.

⁵ T. Zöllner, 'Die transcendante Physik und die sogenannte Philosophie', *Wissens. Abhandl.* Vol. 1 to 3, Leipzig, 1878-79. New edn. Tischner: *Vierte Dimension und Okkultismus*, Mutze, Leipzig, 1923.

⁶ Hartmann, *Der Spiritismus*, Friedrich, Berlin, 1885.

⁷ A. Aksakof, *Animismus und Spiritismus, Versuch einer kritischen Prüfung der mediumistischen Phänomene*, Leipzig, 1890.

nothing but facts. A counter-reply was published.¹ Finally the philosopher K. du Prel, in a series of very learned works, became the champion of 'scientific' spiritism.²

15 'Scientific' Spiritism

We may say that from 1870 onwards the history of spiritism overlaps with that of metapsychics, as the spiritists made increasing use of experiments and were no longer satisfied to make the spirits give them instruction and advice by talking or writing. However, religious spiritism maintained and even extended its ground in countries with a strong religious tradition, such as Britain. Influential periodicals and countless books assured the faithful of the certainty of communication with the dead, and several ecclesiastics, statesmen and distinguished scientists boldly proclaimed their belief. But they did not accept entirely the gospel according to Allan Kardec, and there was a non-conformist spiritism which rejected the dogma of reincarnation. In this connection, it is interesting to compare 'The Book of the Spirits' with Stainton Moses' 'Spirit-teachings', both dictated by the Unseen.³ The French followers of Kardec made considerable efforts to increase spiritist unity, and on their initiative the International Spiritualist Federation was founded in 1923, under the presidency of Sir Arthur Conan Doyle.

In France, the *Revue spirite*, founded by Kardec in 1858, continued for a long time to maintain orthodoxy among its thousands of readers. His disciples also applied themselves eloquently to this task in their books. But certain spiritualists, such as Camille Flammarion, remained indifferent to this religious zeal.⁴ Finally the spiritists yielded, although regretfully, to the influence of the metapsychists, and began to pride themselves on being scientific. They lost ground continually to their opponents, but continued to defend desperately the essential points.

¹ Hartmann, *Die Geisterhypothese des Spiritismus und seine Phantome*, Leipzig, Friedrich, 1891.

² K. du Prel, *Studien aus dem Gebiete der Geheimwissenschaften*, 2 vol., Leipzig, 1890-91; K. du Prel, *Die Entdeckung der Seele durch die Geheimwissenschaften*; Altmann, Leipzig, 1863, *Die Magie als Naturwissenschaft*, 2 vol., 1899.

³ Stainton Moses, *Spirit-teachings*. London, 1883.

⁴ C. Flammarion, *L'inconnu et les problèmes psychiques*, 2 vol., Flammarion, Paris, 1900.

V. METAPSYCHICS: CROOKES (1870)

16 *First Metapsychic Enquiry*

Metapsychics begins with Crookes, but Crookes's work arose out of the very serious enquiry carried out by the London Dialectical Society in 1869.¹ This enquiry held fifty séances and arrived at the following conclusions:

- '1. Sounds of very various kinds, appearing to come from the furniture, floor and walls of the room, and often producing vibrations which can be felt, appear to occur without being caused by muscular or mechanical actions;
- '2. movements of heavy bodies occur without mechanical force or any muscular action by the persons present, and often without any contact or relation to anyone;
- '3. these sounds and movements often occur in the way and at the time desired by the sitters; by means of a simple code of signals, they give answers to questions and dictate alphabetically coherent messages;
- '4. the replies and messages obtained in this way are, for the most part, of a trivial nature; but they sometimes reveal facts which are known to only one of the sitters;
- '5. the phenomena require arbitrary conditions; we note above all that the presence of certain people seems to be necessary to their production, while others hinder it, but this does not seem to depend on the belief or scepticism of the persons in question with regard to the phenomena;
- '6. nevertheless, the production of phenomena is not made certain by the presence or absence of any particular person.'

It is interesting to reproduce this memorable statement, which was the first scientific recognition of metapsychics. The committee was unanimous about the facts mentioned in the report; but others, such as apparitions of hands and faces, spontaneous playing of musical instruments, invulnerability to red-hot coals, apports of flowers and fruit into a closed space, description of future events, etc., were only accepted by some of the enquirers.

17 *The Experiments of Crookes*

In England, as everywhere else, the scientists were in disagreement.

¹ *Report on Spiritualism of the Committee of the London Dialectical Society*, Longmans, London, 1871.

Professor Huxley had refused to take part in the enquiry because it did not interest him. Lubbock, Tyndall and Carpenter remained sceptical. At their invitation, William Crookes, a distinguished chemist and physicist, for thirty years a member of the Royal Society, famous for his discovery of thallium, his methods of analysis, his preventive treatment for foot and mouth disease, his work on photography, the metallurgy of gold and silver, spectroscopy, astronomy, etc., undertook six months later the study of spiritualism.

Knowing of the astonishing experiences of Lord Adare with D. D. Home,¹ he decided to study this medium. After the very first experiments he wrote: 'I am unable to give an opinion on the cause of the facts which I have witnessed; but that certain physical phenomena, such as the movement of material objects and the production of sounds resembling electrical discharges, occur in circumstances in which they cannot be explained by any law of physics known at present, is a fact of which I am as certain as I am of the most elementary facts of chemistry. My scientific studies have consisted of nothing but a long series of precise observations, and I should like it to be clearly understood that the facts which I am asserting now are the result of the most careful research.'

We refer our readers to his sober and well-written accounts² for a description of the way in which, for the first time, psychic phenomena were submitted to precise laboratory methods. Crookes made ingenious apparatus for his experiments. He observed the change of weight of bodies without physical contact and the playing of tunes on an accordion enclosed in a metal cage. Without committing himself as to its nature, he gave the name of *psychic force* to the force the existence of which he had just demonstrated. From 1870 until 1873, Crookes continued to carry out original research with the same precision, but outside spiritualist circles where, as he ironically said, he was admitted 'as a stranger might have been permitted to witness the mysteries of Eleusis, or a pagan to contemplate the Holy of Holies'. The phenomena he observed were produced in full light by Home and by Miss Kate Fox. He divided them into several

¹ Adare, *Experiences in Spiritualism with D. D. Home*, London, 1869. Private edition, published in 1924 by the English S.P.R. under the name of the Earl of Dunraven, *Proc. Vol. 35*, Part 93.

² W. Crookes, *Experimental Investigations on Psychic Force*, Gillman, London, 1871; W. Crookes, *Researches into the Phenomena of Modern Spiritualism*, Burns, London, 1874.

classes; movements of heavy bodies with and without contact, raps and other noises, change in the weight of bodies, dematerialization of matter, luminous apparitions in the form of clouds or human limbs, reading through opaque bodies, and direct writing by means of a pencil which moved without anyone holding it.

With a medium no less remarkable, Florence Cook, he asserted that he had obtained a phenomenon more wonderful than any of the preceding: the appearance of a being of great beauty, a woman apparently alive and in no way resembling the entranced medium; who walked, talked, allowed herself to be photographed and disappeared suddenly when the medium awoke. This mysterious being called herself Katie King, and said that she had left earthly life and could only return in this materialized state for three years. Indeed, she vanished to return no more on May 21, 1874, after giving to the sitters a lock of her hair and a fragment of her white dress. She had given instructions for the treatment of her medium, beside whom she had often showed herself, and who had begged her to stay. At a scientific conference, twenty-four years later, the great scientist, at the height of his fame, declared solemnly that he had nothing to retract. But he did not embrace the spiritist faith, and one may read in his phraseology that he admitted the possibility of other explanations. In any case, he always observed and reasoned in a scientific manner; the Crookes of thallium and the cathode rays is inseparable from the Crookes of Katie King.¹

18 *The English and American S.P.R.*

Meanwhile Crookes's experiments had stirred the curiosity of the scientific world. Russel Wallace wrote on the miracles Crookes had observed.² Professor William Barrett, formerly Tyndall's tutor, did not hesitate to publish experiments on the communication of thought without sensory means, and he started the attempt to form an association to study these phenomena. He succeeded, thanks to the help of Stainton Moses, C. C. Massey, Myers, G. J. Romanes, etc., and on February 20, 1882, the Society for Psychical Research (S.P.R.) was founded, which has since played an important rôle in the history of metapsychics. Its first President, Henry Sidgwick of Cambridge, announced in these words the aims of the Society:

¹ W. Crookes, 'Notes on Séances with D. D. Home', *Proc. S.P.R.*, Vol. 6, Part 16, 1889.

² A. Russel Wallace, *On Miracles and Modern Spiritualism*, Burns, London, 1873.

'We must accumulate facts upon facts, add experiment to experiment, not argue with sceptics about the truth of such or such an isolated fact, but repose our conviction upon the proof which seems to result from the whole. . . . We must place the incredulous in the following dilemma: either to admit that the phenomena are inexplicable, at least by them, or to accuse the investigators of lying or dishonesty, blindness or faulty memory, that is to say of intellectual and moral defects which are only compatible with complete imbecility.'¹

This programme was magnificently carried out with the help of scholars such as Professor and Mrs Sidgwick, S. Stewart, Gurney, Podmore, A. J. Balfour, Crookes, William James, Myers, Oliver Lodge, William Barrett, McDougall, F. C. S. Schiller, etc.² The S.P.R. has amassed an enormous stock of observations on telepathy, suggestion and hypnotism, clairvoyance and the subliminal faculties, automatic writing, apparitions of the living, and haunts. But it has perhaps been too preoccupied with mental phenomena to the neglect of the physical ones. Crookes himself advised his colleagues to persevere in this field.

A branch of the English S.P.R. was founded in the United States in 1884 by Hodgson, William James, Newcomb, Stanley Hall, Pickering, Peirce, Royce, etc. The publications of this Society are also important.

19 *Telepathy and Mrs Piper*

The combined efforts of psychical researchers in England, the

¹ Three Frenchmen have been President of the S.P.R.: Charles Richet (1905), Henri Bergson (1913) and Camille Flammarion (1923).

² S.P.R. 'Reports of the Committees on Thought-reading and Thought Transference', *Proc.* Vol. 1, Parts 1 to 4; Vol. 2, Part 5, 1882-4; O. Lodge, 'An account of some experiments of thought transference', *Proc.* Vol. 2, Part 6, 1884; H. and E. Sidgwick and G. A. Smith, 'Experiments in thought transference', *Proc.* Vol. 6, Part 15, 1890; E. Gurney, 'The stages of hypnotism', *Proc.* Vol. 2, Part 5, 1884; F. W. H. Myers, 'Automatic writing', *Proc.* Vol. 3, Part 8 and Vol. 4, Part 11, 1885-7; Gurney, Myers and Podmore, *Phantasms of the Living*, 2 vol., Trubner, London, 1886; E. Gurney and Myers, 'On apparitions occurring soon after death', *Proc.* Vol. 5, Part 14, 1889; F. Podmore and F. W. H. Myers, 'Phantasms of the dead', *Proc.* Vol. 6, Part 16; F. W. H. Myers, 'On alleged movements of objects without contact occurring not in the presence of a paid medium', *Proc.* Vol. 7, Parts 19 and 20, 1892; R. Hodgson, 'A case of double consciousness (Ansel Bourne)', *Proc.* Vol. 7, Part 19, 1891; O. Lodge, 'Some recent thought transference experiments', *Proc.* Vol. 7, Part 20, 1892; B. Thaw, 'Some experiments in thought transference', *Proc.* Vol. 8, Part 23, 1892; Mrs Sidgwick and Miss Johnson, 'Experiments in thought transference', *Proc.* Vol. 8, Part 23, 1892; A. Backman, 'Experiments in Clairvoyance', *Proc.* Vol. 7, Part 19, 1891.

United States, France and Germany, established at this time the existence of all forms of telepathy. In the English S.P.R., this was confirmed by the work of Gurney, Podmore and Myers (1885). Richet, after six years of experiments, published a paper on thought transference, clairvoyance, diagnosis of internal illness, and the *rapport* of subjects with their magnetizers, etc.¹ Ochorowicz demonstrated the existence of mental suggestion.² In Germany, Dessoir, Schmoll and Schrenck-Notzing³ made attempts to study telepathy under hypnosis. Almost everywhere, psychic effects at a distance, transmission of ideas, sensations and purpose, were reported by numerous experimenters, and Pierre Janet himself quotes many cases of hypnotic sleep induced at distances varying from a few metres to two kilometres.

The appearance in the United States of a great medium, Mrs Piper, stimulated new research into mental phenomena. Mrs Piper had no gift for physical phenomena, and her trances showed great similarity to the phenomena of 'possession'. She was thoroughly studied from 1884 onwards, by famous British and American psychologists and philosophers: Hodgson, Hyslop, William James, Myers, Barrett, Lodge, etc. All these scholars bore witness to the remarkable powers of Mrs Piper. The experiments lasted for several years and were the subject of many reports.⁴ While Hyslop and Lodge were convinced of the genuine incarnation of the personalities of the dead, Myers and James hesitated to pass judgment; but Mrs Piper's gifts led them to new theories of psychology. They inspired Myers's historic works on subliminal consciousness and human personality.⁵

¹ C. Richet, 'Relation de diverses expériences sur la transmission mentale, la lucidité et d'autres phénomènes non explicables par les données scientifiques actuelles', *Proc.* Vol. 5, Part 13, 1888.

² Ochorowicz, *De la suggestion mentale*, Doin, Paris, 1887.

³ M. Dessoir, 'Experiments in muscle-reading and thought transference', *Proc.* Vol. 4, Part 19 and Vol. 5, Part 13, 1887-88; A. Schmoll, 'Experiments in thought transference', *Proc.* Vol. 3, Part 11, 1887. Also Schmoll and Mabire, *Proc.* Vol. 5 Part 12; Schrenck-Notzing, 'Experimental studies in thought transference', *Proc.* Vol. 7, Part 18, 1891.

⁴ Cf. in particular, R. Hodgson, 'A record of observations of certain phenomena of trance', *Proc.* Vol. 8, Part 21, 1892; William James, 'Report on Mrs Piper's Hodgson-control', *Proc.* Vol. 23, 1909; Mrs Sidgwick, 'A contribution to the study of the psychology of Mrs Piper's trance-phenomena', *Proc.* Vol. 28, 1915, a remarkable paper in which will be found a bibliography of the subject.

⁵ F. W. H. Myers, *The Subliminal Consciousness*, op. cit.; *Human Personality and its Survival of Bodily Death*, op. cit.

Another medium, Mlle Hélène Smith, was studied by the psychologist Théodore Flournoy of Geneva, who showed how 'subliminal romances' are developed, and gave a plausible explanation of spiritist communications and memories of former lives. His book¹ marks an epoch in psychical research.

The study of clairvoyance in England and the United States was also advanced by other remarkable mediums: Mrs Holland, Mrs Thompson, Mrs Verrall, Mrs Leonard and Mrs Smead.² The cross-correspondences and book-tests were developed from the methods of Mrs Piper.

The psychological interpretation of psychic phenomena was assisted by the admirable studies of multiple personality made by Morton Prince and Walter Prince, as we shall see in the chapter on prosopopesis.

The scientific study of mental phenomena was carried on mainly in England and the United States. In France, however, Warcollier studied telepathy and Osty clairvoyance.

20 *Eusapia and Ectoplasm*

The study of physical phenomena, abandoned in England, was hardly any further advanced in France, in spite of the experiments and books of the pioneering Dr Gibier.³ About 1890, this subject suddenly returned to the forefront of attention with the discovery

¹ T. Flournoy, *Des Indes à la planète Mars*, Etude sur un cas de somnambulisme avec glossolalie, Eggiman, Geneva, 1900; Cf. also T. Flournoy, *Nouvelles observations sur un cas de somnambulisme avec glossolalie*, Eggiman, Geneva, 1902; T. Flournoy, *Chorégraphie somnambulique*; Le cas de Madeleine G., Geneva archives of psychology and a pamphlet, Kundig, 1904; T. Flournoy, 'Esprits et médiums', *Metapsychic and psychological miscellany*, Kundig, Geneva, 1904.

² A. Johnson, 'On the automatic writing of Mrs Holland', *Proc.* Vol. 21, Part 55, 1908; Additional papers: *Proc.* Vol. 25, Part 60 and Vol. 25, Part 63; Lodge, Myers, V. Eeden, Wilsons, Piddington, Hodgson, Mrs Verrall, 'The trance phenomena of Mrs Thompson', *Proc.* Vol. 17, Part 44, 1902; Mrs Verrall, 'On a series of automatic writings', *Proc.* Vol. 20, Part 53, 1906; E. Sidgwick, 'An examination of book-tests obtained in sittings with Mrs Leonard', *Proc.* Vol. 31, Part 81, 1921; Mrs W. H. Salter, 'A further report on sittings with Mrs Leonard', *Proc.* Vol. 32, Part 82, 1921; H. Hyslop, 'Report on the trance phenomena of Mrs Smead', *Proc. A.S.P.R.*, Vol. 1, Part 3, 1907; J. H. Hyslop, 'The Smead case', *Proc. A.S.P.R.*, Vol. 12, 1918; Lady Troubridge, 'On a series of sittings with Mrs Osborne Leonard', *Proc.* Vol. 30, Part 78, 1919.

³ P. Gibier, *Le spiritisme ou fakirisme occidental*, Durville, Paris, 1886, New edition 1922; P. Gibier, 'Analyse des choses, transcendental physiology', essay on the science of the future, Durville, Paris, 1890, New edition 1921; P. Gibier, 'Recherches sur les matérialisations de fantômes, la pénétration de la matière et autres phénomènes psychiques', *Ann. des sc. psych.*, 1901.

of the striking medium, Eusapia Palladino. It was the famous Lombroso who brought her to public attention, at first against his inclination, as he did not believe in this type of phenomenon. Prompted by Professor Chiaia, he decided to visit this witch, whom he considered to be a case of hysteria. At the first sitting a table rose in the air, loud knocking was heard, and a bell, rising above the sitters, came and rang loudly among them. Lombroso, who was firmly holding Eusapia's hands, felt his chair pulled away from him and invisible fingers touching his face. At a second sitting Lombroso saw, in full light, a small table sliding over the floor and a saucer full of flour turning itself upside down on a table without spilling a single grain. Astonished but convinced, the scientist wrote some months later: 'I am bewildered and regretful that I opposed so persistently the possibility of the facts known as "spiritist"; I say "the facts", because I am still opposed to the theory'. He tried to explain these facts by the hypothesis that, with persons in a hysterical or hypnotic state, the stimulation of certain brain centres produces a displacement and transmission of physical force.¹

This stimulated many further experiments. All the workers in psychical research and many distinguished sceptics wished to form their own opinions of these extraordinary manifestations. Eusapia was invited all over Italy, France, England and Germany. In 1892 she gave seventeen séances at Milan in the presence of Lombroso, Richet, Aksakof, du Prel, the physicists Gérosa and Ermacora, and the astronomer Schiaparelli. These scholars conceded that 'phenomena of an unknown nature' took place, which they could not explain. In one of these experiments Eusapia had been lifted up from her chair and put on to a table; lights, noises, breezes, touches and finger-prints were produced. In 1893 and 1894, séances took place with Richet, Schrenck-Notzing and Lombroso. They obtained beautiful clay mouldings. Then Eusapia went to Warsaw, where she gave forty séances in the presence of Ochorowicz and the Polish scientific élite; to Carqueiranne and the island of Ribaud, where Professor Richet introduced her to Sidgwick, Lodge and Myers; to Naples where she was studied by three experts in conjuring, Feilding, Baggally and Carrington; and to Cambridge, where she was unfairly treated by the representatives of the S.P.R.

We must also mention the experiments of l'Agnélas (1895),

¹ C. Lombroso, *Ricerche sui fenomeni ipnotici e spiritici*, Turin, 1909.

sponsored by Colonel de Rochas;¹ those of Gênes (1901), carried out by the Professors Morselli and Porro;² those of the General Psychological Institute at Paris (1905-1908);³ and finally those of Professor Bottazzi at Naples (1907),⁴ which confirmed the authenticity of Eusapia's paranormal faculties.

After Eusapia, several other remarkable mediums: Stanislaw Tomczyk, Stanislaw P., Eva C., (Marthe Béraud), Kathleen Goligher, Franek Klouski, Gouzyck, Nielsen, Willy S., Maria Vollhart, and Mrs Silbert helped to advance the study of physical phenomena in Europe. Besides the usual movements of objects, most of them also gave life-like materializations.⁵ Ochorowicz and Schrenck-Notzing⁶ experimented indefatigably. They studied, with the help of photography, the methods of formation of the *substance* (Maxwell and Mme Bisson), or *ectoplasm* (Richet), or *teleplasm* (Schrenck-Notzing), the raw material modelled by unknown forces. In 1918 the International Metapsychic Institute was founded at Paris which, under Dr Geley's direction, made a special study of physical phenomena.

The work of the English physicist Crawford (1915-1918)⁷ made a great advance in the understanding of the mechanism of action at a distance. After half a century of hostility and indifference, the tradition of Crookes's work was continued in England. Only the rarity of good physical mediums held up research in spite of the considerable development of experimental methods.

¹ A. de Rochas, *L'extériorisation de la motricité*, a collection of experiments and observations, Chamuel, Paris, 1896.

² H. Morselli, *Psicologia e Spiritismo*, impressions and critical notes on the mediumistic phenomena of Eusapia Palladino, 2 vol., Bocca, Turin, 1908; Résumé by the author: 'E. Palladino et la réalité des phénomènes médiumniques', *Ann. des sc. psych.*, nos. 4, 5, 1907.

³ J. Courtier, 'Rapport sur les séances d'Eusapia Palladino à l'Institut général psychologique', *Bull. Inst. Psych.*, nos. 5, 6, 1909, Paris.

⁴ P. Bottazzi, 'Dans les régions inexplorées de la biologie humaine', Observations and experiments with Eusapia Palladino, *Ann. des sc. psych.*, nos. 8, 9, 10, 1907.

⁵ References will be given in the chapter on teleplasty.

⁶ Schrenck-Notzing, *Physikalische Phänomene des Mediumismus*, Studien zur Erforschung der telekinetischen Vorgänge, Reinhardt, Munich, 1920; T. Longaud, *Les phénomènes physiques de la médiumnité*, Payot, Paris, 1925; Schrenck-Notzing, *Materialisations Phänomene*; Ein Beitrag zur Erforschung der mediumistischen Teleplastie, II Reinhardt, Munich, 1923; Schrenck-Notzing, *Experimente der Fernbewegung* (Telekinese) im psychologischen Institut der Münchner Universität und im Laboratorium des Verfassers, U.D. Verlag, Stuttgart, 1924.

⁷ W. Crawford, *The Reality of Psychic Phenomena*, Raps, levitations, etc., Watkins London, 1917.

VI. THE MODERN PERIOD

21 *The Situation in France*

The 1914-18 war caused a serious set-back to spiritism, since a negligible number of apparitions after death were observed in the families of the millions of soldiers who fell on the field of battle, while the dramatic circumstances of these 'disincarnations' should have created the most favourable conditions for survival, even if only temporary. On the other hand, psychical research had continued to make progress in spite of the resistance of scientific and philosophic prejudice. After the war it had a brilliant renaissance, particularly in France, following the demonstrations held in 1922 by Dr Geley at the Metapsychic Institute in Paris, with the teleplastic medium Gouzyk. Eighty distinguished intellectuals were invited to the sittings and thirty-four of them, scholars, teachers, doctors, writers, etc., signed a statement asserting the reality of the phenomena of telekinesis, or movement at a distance. After Geley's death, Dr Osty used infra-red rays with other mediums, which silenced the criticism aroused by the earlier séances with dim lighting.

The impression made by these results prompted some teachers at the Sorbonne, MM. Dumas, Piéron, Lapique and Laugier, to try to verify them with the medium Eva (1922), and MM. Langevin, Rabaud and Meyerson to do the same with Gouzyk (1923). They declared the experiments a failure and even suggested that the medium had attempted fraud. A careful analysis of their statement did not, however, allow that conclusion to be drawn, and an understanding of the psychology of the mediums explained the failure, as we shall show later (55). This did not prevent Professor Charles Richet from presenting the Academy of Science with his *Traité de métapsychique* in 1922, or the *Revue métapsychique* from beginning its brilliant career.

22 *The International Conferences*

A year earlier the first International Conference of Psychical Research had taken place at Copenhagen under the aegis of Carl Vett. Many scholars took part, but there were still more of them at the second Conference which took place at Warsaw in 1923. National committees had been set up and papers selected. This conference took two important decisions: to maintain a clear

distinction between psychical research and spiritism,¹ and to define a terminology to describe phenomena. A committee was set up, of which the author was a member, but it never succeeded in establishing a uniform international terminology, as is customary with other sciences.

The third Conference was held at Paris in 1927, under the presidency of Charles Richet and with Professors Hans Driesch and Oliver Lodge among those present. It accepted about forty papers, some of them brilliant. The fourth Conference took place at Athens, with Driesch presiding, in 1930, and the fifth at Oslo in 1935. That was the last of these international meetings until after the second World War, when they were resumed on American initiative.

The first post-war conference was arranged to take place at Utrecht in 1953, by the Parapsychology Foundation of New York and by Professor Gardner Murphy, and only specialists were invited, mainly from Universities, who had already distinguished themselves by their work and writings and who were known to use sound scientific methods. About sixty members took part; psychologists, doctors, mathematicians and philosophers. Four main groups were formed: Quantitative Work, Psychiatric and Psychoanalytic Aspects, Spontaneous Phenomena and Qualitative Work, and Personality of Mediums. The question of survival was deliberately left aside but room was made for philosophical interpretations, which in any case did not include anything very new. Physical phenomena were not touched upon.² All the emphasis was placed on the phenomena of clairvoyance and their relations with the pathology of the unconscious mind. The general orientation of the Conference thus justified the name of 'parapsychology' rather than 'metapsychics'. It is therefore understood that the latter term, of French origin, as well as the term 'psychical research' in use in English-speaking countries, will be abandoned in favour of 'parapsychology'. It was also observed that the word 'psychic' had been made use of by the spiritists, with or without the prefix 'meta',

¹ This is the declaration agreed upon by the Warsaw Conference: 'The Second International Conference of Psychical Research: Protests against the confusion which is continually made in all countries between spiritism and psychic science; Declares that the hypothesis of human survival is only one possible interpretation of the facts, and that in the present state of knowledge, no interpretation can be considered definitely established; Asserts again the positivist and experimental nature of psychic science, which does not depend on any moral or religious belief.'

² *Proc.: Parapsychology Foundation, New York, 1955.*

and that therefore it was important to further separate ourselves from them by relating the phenomena that we study to normal psychology in a wider and deeper perspective.

23 *Quantitative Parapsychology*

This unusual expression was used at the Utrecht Conference to describe a method of studying phenomena of extra-sensory perception limited to simple, unambiguous objects such as playing cards. Its great advantage is that it permits statistical evaluation of the results. Richet had already used it seventy years before in the early days of telepathy. A Professor of psychology at Duke University in the United States, J. B. Rhine, revived it to demonstrate extra-sensory faculties. He carried out card experiments with his students for several years, starting in 1930, and obtained mathematical proof of the reality of the phenomena. Better still, the comparison of curves enabled him to derive certain functional laws which had been qualitatively recognized by the early workers.

Without disparaging his great services to parapsychology, especially in obtaining scientific recognition, we may regret that Rhine coined a new term, 'extra-sensory perception', which is unwieldy and implies a hypothesis even more than does Richet's word 'cryptaesthesia'. The only accurate expression would be 'extra-sensory knowledge'. We shall continue therefore to use Boirac's word *metagnomy*, which includes both telepathy and clairvoyance. We shall later discuss the limitations of the quantitative method, emphasizing that it cannot replace the methods of the early experimenters. Rhine has not inaugurated a new era of research, but he has brought to bear on the work new scientific arguments which are particularly convincing to those accustomed to work with statistics.¹

These arguments have not yet penetrated to the French psychologists. There was no representative of the French universities at the Utrecht Conference. This arises perhaps from the present confusion in psychical research in France. The Metapsychic Institute has declined since the death of Charles Richet. The research societies, hampered by the uneducated, spiritists and occultists, become more

¹ Principal works of Rhine: *Extra-sensory Perception* (1934), *New Frontiers of the Mind* (1937), *Extra-sensory Perception after 50 Years* (1940), *The Reach of the Mind* (1941).

and more unattractive to scientists. There are no serious publications. The centres of activity have shifted to the English-speaking countries, West Germany and Holland, where the University has set up a chair of parapsychology held by Dr Tenhaeff.

CHAPTER II

THE PHENOMENA

I. CLASSIFICATION

24 *Difficulty of Classification*

There is considerable variety in metapsychic phenomena. W. Mackenzie counts forty-five kinds. Morselli distinguishes nine classes and forty-two types among the physical phenomena of Eusapia Palladino alone, and admits that he has forgotten some. But these descriptions are based on superficial characteristics. Flournoy showed that the deeper characteristics of the phenomena could be classified from several points of view: genuine paranormality, intellectual content or meaning, psychological type, the state of the personality producing them, their usefulness to the subject, and their relationship to his will. Now some of these classifications are unscientific and others inadequate. The most important of them, the psychological type, only leads to a superficial and even false classification, since we have to deal with the current prejudices about metapsychics. Thus the visions of hypnotic subjects become 'sensory hallucinations', and the movements of tables 'motor automatisms'. It is useless to discuss phenomena of subjectivity in mediumistic impersonations and phenomena of ideation in the messages of the trance state. Finally, such a classification leaves out the physical phenomena which are sometimes inextricably mixed with intellectual or subjective phenomena.

Another factor is the state of the subject who produces the phenomena. This may be natural sleep, half-sleep, more or less complete hypnosis, or even an apparently waking state. Besides this the phenomena may occur spontaneously or may result from a suggestion. No classification can be based on these secondary distinctions.

25 *The Classifications of Boirac and Maxwell*

More satisfactory solutions to the problem must be found. In 1893, the philosopher Boirac divided the parapsychic sciences into five groups: *psychopathics* (suggestion and hypnotism), *cryptopsychics* (automatic writing, spiritism), *psychodynamics* (magnetism), *telepsychics* (telepathy and clairvoyance), *hyloscopics* (influence of matter on man, rhabdomancy).¹

Later he replaced this classification by a more exact one, based on the relationship with known phenomena. Thus he distinguished: *hypnoid* phenomena, which seem to be explicable in terms of known forces; *magnetoid* or *electroid* phenomena, which seem to involve forces as yet unknown; and *spiritoid* phenomena, which seem to involve paranormal forces. These phenomena 'do not normally belong to our world, but break suddenly into it from some region of existence distinct from that in which we ourselves live'.

Boirac was the first to agree that this was still not a scientific classification, based on the nature of the phenomena. The phenomenon of clairvoyance, for example, which does not require a spiritist explanation and seems to be a natural human faculty, is far more mysterious than any spiritoid phenomenon which can be traced back to a division of the personality.

In 1903 J. Maxwell, a distinguished French lawyer, made a division between *material* or *physical* phenomena and *mental* phenomena.² The first class included raps, various noises, movements without contact (telekinesis), or with contact insufficient to explain them (parakinesis), apports or inexplicable apparitions of objects, the passage of matter through matter, visual phenomena (emanations, lights, forms, materializations), imprints, mouldings or drawings, change of weight of objects and levitations, change of temperature and spontaneous combustion, and breezes. As for mental phenomena, that is to say those which involve the expression of an idea, they are subdivided into: typtology or table-rappings, grammatology or spelling out of sentences, automatic writing with or without mediation, direct writing, mediumistic impersonations,

¹ E. Boirac, *La psychologie inconnue*, an introduction and contribution to the experimental study of psychic science, Alcan, Paris, 1908.

² J. Maxwell, *Les phénomènes psychiques*, Researches, observations and technique, Alcan, Paris, 1903.

direct voice, various automatisms (crystal-gazing, telepathy, telaesthesia) and clairvoyance.

26 *Richet's Classification*

In his *Traité de Métapsychique*,¹ Richet continues to distinguish two main classes of phenomena, which he calls *objective* and *subjective*. The first are external, perceptible by the senses and mechanical, physical or chemical in nature; they are not dependent on laws at present known and seem to have an intelligent character. These are: 'movements of objects without contact, haunted houses, apparitions, photographable materializations, sounds, lights; and all tangible effects accessible to our senses'.

The subjective phenomena are exclusively mental. 'We can accept them without making any change in the known laws of animate and inanimate matter, or of the various forms of physical energy — heat, light, electricity and gravitation — which we are accustomed to measure.' These phenomena seem to result from a 'mysterious faculty of knowing', *cryptaesthesia*, unknown to classical psychology. It occurs under experimental conditions as well as in a spontaneous form. Richet tends therefore to consider telepathy a special case of clairvoyance. Besides this, he omits most of Maxwell's types of effects, because they are related to the classical abnormal psychology in that they involve automatism.

Borac had already declared himself opposed to this arbitrary exclusion. He called 'parapsychic' all phenomena which had been already accepted by official science (hypnotism, suggestion, division of consciousness) and the supernormal phenomena discovered since animal magnetism. He reserved the term 'metapsychics' for those which seemed to require an extra-natural cause.²

We may also criticize Richet's definitions on the ground that in psychical research there is no introspection and therefore no subjective phenomena. For the experimenter, all phenomena are objective.

27 *Other Classifications*

To show how the problem of classification can be solved differently from different points of view, even without different hypotheses,

¹ Alcan, Paris, 1922.

² E. Borac, *L'avenir des sciences psychiques*, Alcan, Paris, 1916.

let us consider also the classifications of Lebedzinski¹ and Mackenzie.²

The Polish metapsychist distinguished four groups of phenomena: change in the physical or mental state (ecstasy, trance, hypnosis, impersonation, etc.); supernormal perception (telepathy, clairvoyance); supernormal action of the mind on its own body (stigmata, etc., transposition of the senses, radiation of energy, projection of doubles, materializations); supernormal action of the mind on matter and energy outside its own organism (physiological actions, telekinesis, raps, dematerialization of matter, etc.). M. Lebedzinski explains all these phenomena in terms of four faculties; the faculty of dramatizing personalities (ideoplasty of the psyche), the faculty of transforming and shaping matter (ideoplasty of matter), the faculty of transforming and emitting energy (ideoplasty of energy), and the faculty of perceiving things which are not perceptible to the senses.

Mackenzie, obviously impressed by the phenomena of haunting which the above-mentioned writers had not sufficiently recognized, made a distinction between *spontaneous* and *induced* phenomena, which corresponds to considerable differences in the scope of the subject's powers. While recognizing that the distinction is somewhat artificial, he proceeds to separate the *supermediumistic* phenomena from the *mediumistic* and *submediumistic*. Each group is subdivided in turn into static or subjective phenomena, and dynamic or objective ones. Finally, these latter fall into three classes: the molar or mechanical type, molecular type, and atomic type.

It may be objected that it is difficult to differentiate these last categories. Further, it is logical to consider physical phenomena in relation to energy and not only in relation to matter. Finally, the contrast 'static-dynamic', borrowed from the vocabulary of mechanics, is less helpful than the contrast 'mental-physical', which is better suited to a science which is, above all, psychological.

28 Towards a Rational Classification

The Warsaw Conference had been asked by the Polish national

¹ *L'état actuel des recherches psychiques*, based on the work of the Second International Conference held at Warsaw in 1923, in honour of Dr J. Ochorowicz, Presses universitaires, Paris, 1924.

² W. Mackenzie, *Metapsichica moderna*, Mediumistic phenomena and problems of the subconscious, Lib. di scienze e lett. Rome, 1923.

committee to give an opinion on the expediency of a classification.¹ It limited itself to ratifying the general division into mental and physical phenomena under the names of *metapsychology* (or parapsychology) and *metapsychophysics* (or parapsychophysics) without entering into detail and without denying that compound phenomena occur. We shall conform to this classification which is likely to stand unchanged so long as psychology and physics remain separate sciences. We shall distinguish therefore a *mental metapsychics* and a *physical metapsychics*.

Mental metapsychics will include the two large sections of *telepathy* and *clairvoyance* (metagnomy). We shall add to these a third group, that of *prosopopesis*, which bears a certain relation to what Boirac called spiritoid phenomena, because they are derived from what is known in pathological psychology as 'division of personality'. We are in agreement with this author's view that these phenomena should not be excluded from parapsychology, in which they play a leading part. As for the remainder, it is impossible to distinguish between paranormal and abnormal psychology, because this division is an artificial one resting on preconceived ideas. As soon as it is admitted that two persons can communicate without sensory means, telepathy will be classed as a psychological fact. But a provisional distinction must be made between the normal and abnormal. A study of the unconscious activity of the mind is an indispensable preliminary to parapsychology and the International Warsaw Conference was justly concerned not to separate them. We have therefore united under the name of *prosopopesis* all phenomena in which new psychological personalities occur (automatic speech and writing, impersonation, possession, etc.).

In considering physical phenomena we shall accept, as a working hypothesis, that they are due to a substance issuing from the living body and under the control of the mind. We shall thus bring the facts of animal magnetism (which Boirac called *bioactinism*) together with the facts of materialization. We shall show that they are governed by the law of ideoplasty. Nevertheless we shall distinguish the phenomena of *telergy*, or the mechanical, physical and chemical effects of the psychic force, from the phenomena of *teleplasty*, in which the psychic force models moving forms which give the illusion of life.

¹ The Conference unanimously adopted the report of its committee which was composed of MM. Lebedzinski, Schrenck-Notzing and René Sudre, convener.

29 *Definition of Metapsychics*

These categories cover all psychical research. The facts are not uniform and nothing resembles a premonition less than the turning of a table without contact. But they are almost always produced in combination. In this sense, physical phenomena always have an intelligent purpose. They are clearly subordinate to psychological phenomena and constitute the means which serve an end. An object seems to disobey the law of gravity, an apparition gives a warning or draws attention to some fact. The element of personal intention, in general unrelated to the experiment, makes its way even into what is called experimental work.

If one succeeds in eliminating it, one finds oneself in the presence of unknown faculties and powers, such as perception without sensory means, insight into the past and the future, communication of thought, creation of transitory forms with the appearance of life, etc. These faculties appear, at first sight, to belong only to certain individuals and to function irregularly in conditions as yet little known. It is a question whether they belong potentially to all humanity, or perhaps to the higher animals; and so far from being a product of evolution they may be a survival from times when consciousness was less developed, and instinct acted more certainly than intelligence. This question leads us to the study of mind wherever it occurs in nature (Chapter XII).

Considering for the moment only human beings, metapsychics is the study of certain abnormal powers of the individual mind, considered in its conscious and unconscious activity and in its relations with other minds and with matter. To avoid even a suspicion of begging the question, we shall use Richet's definition with slight modification: metapsychics is the science which studies the physical or psychological phenomena caused by seemingly intelligent forces or by unknown faculties of the human mind. ✓

30 *Psychological Unity of the Phenomena*

There are many kinds of phenomena, but do they arise from different faculties? At first sight one might be tempted to think they do, for mediums are usually specialists. Eusapia was the typical teleplastic medium, Mrs Piper the typical clairvoyant. There are also water-diviners (dowsers), psychometrists, healers, etc. There are many fewer physical mediums than clairvoyants, and Richet

described the former as 'exceptional persons, extremely rare'. He certainly means by this *good* mediums, but in the mental field a powerful gift is also rare: one does not find a Piper or Ossowiecki every day. Considering not the degree of the phenomena, but their kind, it would seem that persons likely to produce raps, for example, are as widespread as sensitives. Besides, there are but few mediums who have not given, in distinct periods or even simultaneously, the two kinds of phenomena. The great clairvoyant Stainton Moses was also a powerful physical medium, and Mme d'Espérance affected magnetic needles. The purest type of mental medium, Mrs Piper, once produced one of Home's phenomena, the extraction of perfume from a flower.

On the other hand, Home and Eusapia combined their telekinetic or teleplastic effects with displays of clairvoyance and thought-transference. Examples could be multiplied.

One of the most modern is the case of Stella C., studied by Harry Price.¹ This medium, who had produced only physical phenomena, had a precognitive vision one day in the middle of a levitation séance. She never had any more. We may therefore accept that although training can create specialized habits, *there is but one metapsychic faculty*. This is a most important idea, as it makes all attempts at piecemeal explanation of psychic phenomena useless.

Lebiedzinski, who studied many mediums, claimed that they were able to produce any phenomena; it was enough to persuade them to it in favourable conditions.² Sometimes they persuaded themselves, like Stanislaw T. when she imitated the phenomena of Eva C. The psychic faculty is thus reduced to ideoplasty, which is the faculty of producing in the psychological and material orders results conforming to the idea. We shall return later to this guiding hypothesis, which is based on the underlying unity of the phenomena.

31 *Rejection of the 'Occult Sciences'*

Wide as this definition is, it does not include all the 'supernatural' beliefs held in ancient times. For one thing, it does not include magic and sorcery.³ The ethnologists and sociologists have made a

¹ H. Price, 'Stella C', A record of thirteen sittings for thermo-psychic and other experiments, *Journ. A.S.P.R.*, No. 5, 1924; Ed. with preface by Haines, 1925, Hurst and Blackett, London.

² *L'état actuel des recherches psychiques*, op. cit., p. 286.

³ Cf. R. Sudre, *Personnages d'au-delà*, Denoël, Paris, 1946; J. Maxwell, *La Magie*, Flammarion, Paris, 1922.

lengthy study of these practices which they relate to a collective belief closely connected with religion. 'Sympathetic' magic depends on the association of ideas, and the magic of invocation assumes the existence of spirits. Both include extremely detailed rituals without which the magician is helpless.

It is obvious that these beliefs are without foundation. The primitive is obsessed with the idea that the name of a person or thing is mysteriously related to it, and that it is only necessary to pronounce a word to produce effects at a distance or to influence people's wills. *Nomina sunt numina*. None of these superstitions has any place in psychical research which is an experimental science related to the psychology of the unconscious. While the magician claims to command spirits and natural forces by his conscious will, the medium has no will, being in a passive state. His phenomena are often produced at the expense of division of his personality. Magic has only been able to maintain its reputation for so long because a number of its practitioners happened to be more or less gifted mediums, capable of clairvoyance or telekinesis. *The formulas and the grimoires, the demons and elementals are all humbug.*

Another offshoot of the old occultism is astrology, or the belief that the destinies of human beings are written in the planets of the solar system. Common sense replies that the formations of the stars in the sky are only illusions, the so-called 'radiations' of the planets have existed from all time, while the laws of heredity are biological and do not depend on the conjunctions of the stars at the moment of birth, when the characteristics of the new individual are already determined. But the use which the astrologers make of their calculations is impressive. The misguided researches of the alchemists helped to found chemistry, but astrology has never given any help to astronomy, since it is founded on imagination and has never had the slightest experimental confirmation.

II. THE MEDIUM

32 *Characteristics of Mediums*

The medium is a living being, man or animal, who produces or helps to produce psychic phenomena.

Mediums who produce mainly mental phenomena are called *metagnomes*; those who produce physical phenomena are *teleplasts*.

In the human race, mediums are found at all ages, from the cradle

to old age. Their faculty may be continually exercised or suffer eclipses. It may be transmitted by heredity or appear suddenly. It appears in various degrees. It may have great intensity at certain critical periods, and then disappear gradually or all at once: Stainton Moses retained his powers from the age of thirty-three to forty-four. Sexual activity or disturbance can eclipse it. It does not depend on sex or intelligence any more than on age, but it is often observed among somnambulists, hysterics, hypnotics and psychotic patients in general. Maxwell believed the faculty was associated with certain spots in the iris of the eye.

In some families the psychic faculty can be traced back four generations. The famous Home was the son of a clairvoyant. The mother and grandmother of Hélène Smith had had premonitory visions, and one of her brothers was also a medium. The members of the Goligher family were all more or less gifted. It is claimed that mediums are so numerous in Poland because the Inquisition left it almost unscathed in the Middle Ages, while in France and Spain thousands of mediums were burnt as sorcerers and diabolically possessed. It is probable that the faculty was more common formerly than it is today, and that it is still more frequent among primitive peoples than in civilized countries. Lombroso ascribes this fact to the growth of scepticism. He thinks also that civilization has increased the ease of communication between persons and rendered telepathy and clairvoyance useless. The faculty has disappeared with the need for it.

33 *The Effects of Accidents and Training*

The faculty is innate, but it seems that it can also be acquired. A traumatic experience, an emotional shock, the physiological changes of puberty and the menopause can induce or favour it. Eusapia Palladino had her parietal bone half broken at the age of one year, and at eight she saw her father slaughtered by brigands. Mrs Piper became a medium after a violent fright and two surgical operations. We shall see later the part played in poltergeist hauntings by young boys or girls at the age of puberty. The Fox sisters, who first inspired spiritism, were between twelve and fifteen years old. The metapsychic faculty seems sometimes to be contagious. Examples of this are the witches of the Middle Ages, the devils of Loudun, the convulsionaries of Saint-Médard, and the frequenters of Mesmer's tub. It is not uncommon for normal people to fall into a trance

while attending a spiritist séance and become mediums in their turn.

These facts make us wonder how psychic faculties might be induced. The ancient religious schools and the primitive races would seem to have solved this problem. Children were turned into magicians and prophets by being subjected to a variety of emotional and physical influences, such as fright, fasting, certain potions and suggestion. There must have been some difficult cases, for the faculty seems to need a neuropathic soil in which to take root; but it does not always do so and it is possible that it might be produced by such influences. The use of drugs is one of the most obvious means.

Sokolowski thought that nearly everybody possessed potential psychic ability, because nearly everybody can be put into a suggestible or hypnotic state.¹ According to other authors, mainly occultists, auto-suggestion is sufficient and by great intensity of will an individual can train himself to produce phenomena, for example, to transmit his thoughts and to 'project the astral body'. There is no doubt that the psychic faculty is strengthened by use. By training and willpower Pascal Forthuny developed metagnomic powers from a trivial gift for automatic writing which appeared spontaneously. Abramowski, who confined himself to the experimental study of telepathy, declared it to be a universal phenomenon and that 'the telepathic faculty can be developed, like all other psychic faculties, by exercises and habit'.²

To sum up, the psychic faculty requires certain physical (probably cerebral) conditions, and mental conditions, but it is possible that the latter may, for a short time, determine the former. A medium can lose his gift either with increasing age, for example at the menopause, or as a result of an emotional shock. In this respect the records of mediums are far from consistent.

34 *Is the Faculty Pathological?*

Are psychic subjects ill? This question was put at the Warsaw Conference, where it produced varied replies. Most of these replies were based either on the spiritist belief that mediums are holy beings, intermediaries between the living and the dead, or on sentimental or

¹ *Compte rendu du Congrès de Varsovie*, op. cit., p. 301.

² Abramowski, *Le subconscient normal*, Alcan, Paris, 1918; Cf. R. Desoille, *Exploration de l'affectivité subconsciente par la méthode du rêve éveillé*, D'Artrey, Paris, 1938.

prejudiced preconceptions. The question must be viewed scientifically, and we must enquire whether the psychic faculty shows psychological or organic symptoms which are associated with certain morbid states.

The nineteenth-century magnetizers had observed that the real somnambulists were their best subjects. The *Journal du magnétisme* remarked, in 1855, that 'the persons most successful at table-turning are those who are known to have had attacks of somnambulism'. In 1860, somnambulism was classed by Mesnet as a mental disturbance. Later, the work of Charcot and his school made it possible to re-connect somnambulism, or the habit of getting up in the night and carrying out actions of which one has no memory on awakening, either with epilepsy or with hysteria and hypnotism. They established also the identity of hypnotic phenomena with hysterical occurrences. This identification explains why Charcot and his successors refused to see the metapsychic faculties of their subjects and regarded them as psychiatric cases.

P. Janet showed very lucidly that spiritist 'mediumistic faculty' is only a form of the disintegration of the personality.¹ He recalled an observation of Charcot's on several young people of the same family who became hysterics as a result of practising spiritism. 'The mediumistic faculty must depend on a certain morbid state analogous to that which can develop into hysteria or madness', he states.² And later he amends this as follows: 'We are inclined to believe that the phenomena of automatism and splitting of personality depend on a state which is unhealthy, but not exclusively hysterical. This state appears to include a great deal besides hysteria.'³ In this he is in agreement with the metapsychist Ochorowicz, who says: 'It is not hysteria which offers a fertile soil to hypnotism, but hypnotic susceptibility which offers fertile soil to hysteria and other illnesses.'⁴

The study of mediums supports this undeniable relationship. Stainton Moses walked in his sleep as a child. Home had nervous

¹ Incidentally, he always refused to admit a paranormal character in the phenomena he observed. If he had guided his subjects in the direction of the 'supernatural', of which he had a holy terror, he would have discovered all that the less prejudiced Richet gave to science. It was while carrying out his classical experiments in suggestion with hysterohypnotic subjects that Bruck, of Berlin, obtained excellent examples of telepathy, *Experimentelle Telepathie*, Stuttgart, 1925.

² *L'automatisme psychologique*, p. 406.

³ *Ibid.*, p. 451.

⁴ *De la suggestion mentale*, op. cit., p. 255.

illnesses and could not walk at the age of six. Eusapia was actually an hysteric. Lombroso, who made a special study of her, states that 'the strange psychic phenomena' of spiritism appear in conjunction with hysteria and hypnosis.¹ He gives several examples of premonitions among hysterics and epileptics. He draws attention to the complete analogy between trance and epileptic fit. This parallel covers the origination of these states by hereditary factors, traumatic experiences, instability of character and the need for protection (which leads to the 'spirit-guides' of spiritism), etc. All Sollier's autoscopic subjects were hysterics. Binet, one of the psychologists who most clearly foreshadowed psychical research, wrote: 'The majority of good mediums are hysterics and in a general sense somnambulists. This can be seen by studying the literature of spiritism; from time to time the most discreet author cannot conceal that a certain excellent medium had a fit or is easily tired because of delicate health.'² Observations made by Dr Lion, of the Hôpital de la Pitié, show that clairvoyance is not incompatible with madness.

Psychosis apart, the psychic faculty can appear transitorily in certain acute morbid states, as Moutier and Osty pointed out.³ To conclude, we note the frequent occurrence of mental and physical phenomena at the time of death.

35 *Types of Hysteria*

The problem of the pathological character of parapsychology was the subject of medical reports at the Utrecht Conference. Dr John Bjorkhem attempted to classify subjects according to their reactions to hypnosis.⁴ He distinguished four types. Type A consists of persons with definite opinions, disciplined imaginations, and an absence of emotional reactions. Under hypnosis, they show little suggestibility. They preserve in the trance state their normal characteristics.

Type B is more common. Its members show more emotional reactions. They are suggestible, and show spontaneous changes in hypnotic sleep; but like type A, they are capable of rational thought and intellectual development.

It is otherwise with types C and D, who are more at the mercy of

¹ *Hypnotisme et spiritisme*, op. cit., p. 9.

² *Les altérations de la personnalité*, op. cit., p. 299.

³ *Revue Métapsychique*, 1925, No. 3.

⁴ 'Psychological Problems Concerning Hypnosis, Hysteria and the Hysterical Type of Reaction', Paper No. 52 E, Utrecht Conference.

their emotions and act on impulse. Type C takes extreme attitudes and does not adapt itself easily to the external world. Suggestion causes change of personality and total amnesia on awakening.

As for type D, it is completely suggestible and given to hallucinations. Its physical habits can be greatly affected. The somnambulists and hysterics in hospitals belong to this class, which Pierre Janet distinguished by its faculty for 'psychological automatism'.

According to this author, it seems that we must not look for psychic subjects among types A and B, but among types C and D, although in his opinion the former also can be hypnotized. In any case he does not think hysteria should be regarded as an illness. It is a kind of reaction by the individual which favours subjective phenomena.

36 *Indications from Psychoanalysis*

The practitioners of psychoanalysis have become very interested in parapsychology because in the course of their consultations they meet with many paranormal, especially telepathic, phenomena. They formed one of the most important groups at the Utrecht Conference and reported many convincing cases. Dr Ehrenwald, of New York, emphasized¹ that telepathic occurrences are subject to the same psychological laws as dreams, neurotic symptoms, clumsy movements, etc. 'Steckel and Freud showed long ago that the telepathic element, for example in a dream, shows exactly the same tendencies towards symbolic representation, reversal, repression, secondary elaboration, etc., as any other subconscious theme present in the dream.'

Professor Emilio Servadio of Rome stated² that the paranormal 'seems to be produced only when certain defence mechanisms, psychological or psychophysiological, of the physical or mental Ego, designed to integrate or to protect our individual life, do not fulfil their function; this allows temporary reversion at certain times to more primitive means of expression or communication'. According to this authority, the phenomena in question are physical as well as psychological. They belong to the deep levels of the subconscious which are passed over by evolutionary tendencies towards individuation, precise apprehension of time and space,

¹ *See and Psychoanalysis*, Paper No. 8.

² *Psychology and Parapsychology*, Paper No. 11.

development of intellectual faculties, and strictly sensory perception. All these mental qualities, characteristic of higher forms of life, are maintained by mental and cerebral mechanisms which may, under stress, reveal the primitive structure beneath. This is the object of the techniques of psychoanalysis. It is in this sense that psychic faculty can be called pathological.

37 Myers's 'Progeneration'

Lombroso, who considers genius a neurosis, sees no objection to relating the psychic faculty to mental pathology. He is in opposition to Myers, who considers Janet's so-called 'psychological misery' to be on the contrary a positive quality, compatible with a normal life. Dubois of Berne states that he has found serious forms of hysteria, convulsive or raving, among persons of high intelligence or moral development; there was nothing wrong with them but an uncontrolled imagination.¹ Jastrow confirms² that mentally dissociated individuals are not necessarily inferior. Metapsychists who have studied many subjects do not generally find among them the types of neurosis that are met with in mental hospitals. They have been struck by their logic and commonsense in the intervals of their trances. They have even found some remarkable personalities among them. 'I refuse absolutely to consider mediums mentally ill', Richet declared,³ although recognizing that they are liable to division of consciousness. But divided consciousness happens to everybody and cannot be considered an illness unless it is permanent, as in multiple personality.

Even then a distinction must be made, and W. F. Prince, the patient observer of the Doris Fisher case,⁴ writes: 'Although psychic faculty requires a certain dissociation, Doris is a living refutation of the theory that it is itself pathological'. Finally Maxwell showed⁵ that psychological division could not be supposed to occur in certain clairvoyant phenomena which do not involve prosopopesis. Osty adds that metagnomic subjects are only exceptionally neuropathic. Even grafted on to a neurosis, the faculty of pre-

¹ Dubois, *Les psycho-névroses et leur traitement moral*, 2nd edn., p. 204.

² J. Jastrow, *The subconscious*, New York, 1906; T. Phlippi, *La subconscience*, Alcan, Paris, 1908.

³ *Traité de métapsychique*, p. 50.

⁴ W. F. Prince, 'The Doris case of multiple personality.' *Proc. A.S.P.R.*, Vol. 9, 1915. Criticized by Hyslop, 1917, *ibid.* Vol. 12.

⁵ *Les phénomènes psychiques*, op. cit., p. 42.

cognition cannot be considered useless.¹ Myers even saw in it a 'progeneration' instead of a degeneration. But here he conflicted sharply with the psychiatrists and psychoanalysts.

Basically, it is a value judgement which divides the metapsychists from the psychiatrists. This is because the latter usually do not know of or deny the paranormal element and consider only the accompanying morbid symptoms. These are sometimes hardly visible. We must observe also that among metapsychists who use mediums in their experiments, there is a tendency to flatter them, to represent to them that they are rare and valuable individuals. Without this use of tact, they would obtain little from them.

38 *Personality Factors*

The importance that the study of personality factors has recently assumed is well known. It was time to apply its techniques to psychic subjects. This was done by two of Rhine's workers at Duke University, J. Fraser Nicol and Betty M. Humphrey.² First they used the questionnaire method. The Guilford system includes five factors: social and intellectual introversion-extraversion, absence of depression, cycloidal tendencies (emotional reactions), and carefree tendencies.

The Guilford-Martin questionnaire measures five tendencies: level of general energy, domination-submission, masculinity-femininity, self-confidence, and nervousness.

The most used questionnaire is Cattell's: cyclothymic-schizophrenic (good natured, egoistic), general intelligence, nervous stability-instability, domination-submission, loquacity-taciturnity, temerity-prudence, imagination-practicalness, mistrust-trust, nervous tension.

To investigate the paranormal faculty of the thirty-six subjects examined, the experimenters used Rhine's Zener cards. From the statistical point of view the total results in favour of ESP are not very significant. But if related to the personality factors of the subjects, it is found that the extrasensory faculty is connected with seven factors: intellectual extraversion, absence of depression, carefree outlook, absence of cycloidal tendency, absence of nervous tension, emotional stability and tranquil confidence. These factors

¹ E. Osty, *La connaissance supranormale*, An experimental study, Alcan, Paris, 1923.

² Nicol and Humphrey, 'The exploration of extrasensory perception and human personality', Paper submitted to the Utrecht Conference.

have something in common — self-confidence, which is thus the most favourable temperamental characteristic for ESP. To this we must add emotional stability. The experimenters add that the experimenter's personality must also be taken into account, which confirms the law of collective psychism.¹

Without wishing to deprecate statistical methods we must remark that the analysis of personality factors should be carried out on highly gifted subjects, and not on persons who are only slightly so, or not at all. The individual clinical observations of psychiatrists and psychoanalysts are more valuable from this point of view than mathematical analyses. The fact, reported by Dr Montague Ullman at the Utrecht Conference, that telepathic dreams occur more frequently among schizophrenics, that is, those who tend to isolate themselves from their social surroundings, is an example of the fruitful contributions that psychiatry can make to parapsychology.²

39 *Methods of Psychological Testing*

At Fribourg-en-Breisgau there is an Institute for the study of parapsychology, directed by Professor Hans Bender, who is particularly interested in experimenting with gifted subjects. For this purpose he has used psychodiagnostic methods which were explained to the Utrecht Conference by M. Dietrich Rasch.³ They include only four tests: handwriting analysis, the Rorschach (or Zullig) test, the coloured pyramid test and the Wartegg drawing test. The handwriting test is the most important. It shows the kind and degree of intelligence, the powers of observation and critical faculty. The style gives information on emotional tendencies and mental disturbances.

The first results submitted to the Conference concerned forty-seven subjects, of whom thirty-nine had experienced spontaneous paranormal phenomena and eight were sensitives already recognized by the Institute. The subjects were divided into three groups by the handwriting test: *unstable, with tendency to dissociation*: eighteen (of whom ten had a tendency to extraversion and eight a tendency to introversion); *highly emotional*: twelve; *suggestible and excitable*:

¹ An interesting paper published in June 1946 in the *Journal of Experimental Psychology* by Dr Schmeidler and Dr Gardner Murphy (Paper No. 12 at the Conference) shows that subjects who believe in the phenomena produce better results than sceptics.

² 'The dream, schizophrenia and psi phenomena', Paper No. 26.

³ 'The psychodiagnostic examination of the mediumistically gifted', Paper No. 38.

seventeen (of whom eleven tended to introversion). It seems from this that gifted subjects appear among personalities of the 'extremely unstable' and 'extremely excitable' types. Rorschach's test confirmed this finding. These results are not in complete agreement with those obtained by Dr Schmeidler in the United States with subjects in card-guessing experiments.¹ She classed them as 'compressive-expansive' and 'well-adjusted-maladjusted', and found that the successful subjects were predominantly expansive and well adjusted. Evidently the study of personality factors in parapsychological subjects is in need of a more unified approach. But it is possible that these results indicate that the gift of clairvoyance, for example, does not belong to a certain personality structure. It may very well be found in diagonally opposed types.

III. PARAPSYCHOLOGICAL STATES

40 *Identity of Trance and Hypnotic States*

The production of psychic phenomena is always accompanied by a particular organic state of the subject called *trance*, which occurs in degrees varying from simple dissociation to convulsive fits. Trance, at least to a certain degree, is identical with the 'nervous sleep' of the early magnetizers. Indeed, the superficial characteristics are identical and hypnotism is the most usual way of putting mediums into a state of trance. But hypnotic sleep is not a variety of ordinary sleep, although it has been thought that hypnotism was produced by mental or cerebral exhaustion, and although certain psychic phenomena such as precognitive dreams sometimes occur in both hypnotic and normal sleep. Binet and Féré stated that 'the majority of neuropaths, and especially hysterics, show a clear predisposition to hypnotic sleep and their sleep differs from normal sleep by certain physical characteristics'.² This was also the opinion of Pierre Janet, who considered the two kinds of sleep to be 'physiologically and psychologically distinct'.³ On the other hand, the study of trance states leads to recognition of their similarity with hypnotic sleep.

Like hypnosis, trance can be spontaneous, voluntary, or produced by external causes — Mesmeric passes, Braidic gazing, alcoholic or other intoxication. Usually, in experimental séances,

¹ 'Separating the sheep from the goats', *Journ. A.S.P.R.*, 1945, 39.

² Binet and Féré, *Le magnétisme animal*, op. cit., p. 68.

³ *Les médications psychologiques*, op., cit., Part I, p. 267.

the subject enters trance voluntarily when conditions are suitable. In general these include silence, contact with one or two persons, and darkness. Telepathic subjects isolate themselves and try to make their minds a blank, certain clairvoyants gaze fixedly at a bright object, and so on. Finally, there are also many subjects who do not produce phenomena until they have been hypnotized. Thus we see that trance and hypnotic states are produced in exactly the same way, show the same symptoms and are both followed by amnesia on awakening. This shows them to be identical.

41 *Symptoms of the Trance State*

The trances of certain subjects are reminiscent of Charcot's major hypnotism, with its three stages: lethargy, catalepsy and somnambulism. It will be remembered that the first was principally characterized by muscular hyperexcitability; the second by immobility and plasticity of attitude, and by automatism; and the third by hyperaesthesia, alert intelligence and definite personality. We know that neither the order nor the characteristics of these stages are invariable, and that an indefinite number of intermediate states has been observed. These depend on the subject's temperament and the influence of his hypnotizer. Similarly, the characteristics of the trance state vary from one subject to another; they can even vary from time to time with the same person. Its relative constancy with each subject depends on the way in which it has been formed, but it would be useless to attempt to draw conclusions about the nature of the psychic phenomena produced at different stages.

This is why we cannot agree with the deductions that Sydney Alrutz drew from analysing Mrs Piper's trance.¹ At first, Mrs Piper needed human contact to enter the trance. She held the sitter's hand and remained silent and concentrated for ten minutes. Then she began to make small convulsive movements which increased in force until she had a slight epileptic fit. Then she made little noises in her throat and fell into a drowsy state, lasting a few minutes. She came out of this with a cry and her voice changed to indicate a new personality. Later, Mrs Piper became able to go into trance without holding anyone's hand. After the first phase of concentration, there followed a second phase of agitation during which she

¹ S. Alrutz, 'Problems of Hypnotism: an Experimental Investigation', *Proc. S.P.R.* Vol. 29, Part 83, 1921.

was still aware of her identity (waking stage). She cleaned her finger-nails, shook her head and shrugged her shoulders, leaned on her cushions and scratched them. Her face flushed and her eyes became fixed. Then her muscles contracted, her mouth twisted, her eyes turned up. Finally she fell into a kind of swoon which marked the entry into trance proper, in which she lost consciousness of her identity and surroundings. Her head fell on to the cushions, her pulse diminished, her respiration fell from twenty-two a minute to seven or ten. With the exception of the hand which wrote and gesticulated, her body remained motionless and insensible. In awakening, the phenomena occurred in reverse order. The séance normally lasted an hour.

According to Alrutz the trance can be divided into three stages: light hypnotic state; cataleptic state distinguished by phenomena of echolalia; lethargic state with total suspension of suggestibility, direct or telepathic. From this he concluded that Mrs Piper's personalities were neither suggested personalities, nor pathological multiple personalities. But what he takes for a lethargic state is really a somnambulistic state or a compound somnambulo-lethargic one. As Charcot states, a pressure on the vertex or merely tickling is sufficient to produce the change from one to the other; and his successors have shown that hypnotism is a mental transformation (no doubt nervous) with symptoms essentially variable according to the individual and the method of induction, but nearly always ending in division of consciousness.

Among the physiological effects accompanying trance, we must mention the increase in pulse-rate (with Eusapia, from 70 to 120, with Miss Goligher from 72 to 110 and even 126), slowing down of breathing (from 28 to 15 or even 12 per minute, for example), coldness of extremities, increase of secretions and sexual stimulation. These factors do not always occur, except perhaps for the coldness of hands and feet which occurs as soon as the trance commences.

42 *Suggestibility in the Trance State*

Objections have been made to the comparison of trance to hypnotic sleep, but not serious ones. First, it has been said that certain mediums were bad hypnotic subjects. When William James tried to hypnotize Mrs Piper, he failed; he had to wait until she was in trance and ask Phinuit, one of her personalities, to help him. By the

use of this subterfuge hypnotism was successfully induced and James obtained a hypnotic state with muscular hyperexcitability, different from her usual trance. But this objection can be easily answered. The fact that the suggestion was accepted during the trance proves that this was in fact a somnambulistic state. The distinguishing characteristic of this state is, indeed, a suggestibility not blind but reasoned. The resistance to suggestions which is sometimes observed and which has also been raised as an objection depends on the strength and coherence of the personalities created in the subconscious mind; that is to say that the external suggestion is in conflict with autosuggestion. The result of the conflict, in somnambulism as in trance, is never in doubt if it is rightly handled. This is a case where gentleness achieves more than force. As Maxwell observed, the trance personalities never resist a skilful suggestion for long. We shall return later to this important point.

Be that as it may, the metapsychic faculty must be considered distinct from suggestibility; but so also must hypnotism. There are mediums who are very suggestible but hypnotizable only with difficulty, such as Hélène Smith, and conversely. Boirac believes that the appearance of suggestibility is a characteristic of the hypnotic state, but only in its initial or light stage, 'and that it becomes weaker as the hypnosis becomes deeper'.¹ It is perhaps preferable to say that suggestibility, either in a somnambulistic or a trance state (which is the same thing), depends on the idea suggested and on the subconscious personality which receives it. If it is a personality created by the experimenter it will accept the suggestion more easily than would an autonomous personality, as we shall see in the chapter on prosopopesis. In any case we must agree with Pierre Janet that: 'The phenomena of suggestion are independent of the hypnotic state; suggestibility can be complete independently of hypnosis, and can be totally absent in a state of complete somnambulism; in brief, it does not vary at the same time and in the same way as this state.'²

43 *Babinski's 'Pithiatism'*

In their conflict with Charcot and the Salpêtrière school of thought, the doctors of Nancy maintained that the so-called 'nervous sleep'

¹ *L'avenir des sciences psychiques*, op. cit., p. 128.

² *L'automatisme psychologique*, op. cit., p. 171.

of somnambulism, now called hypnotism, was an illusion, and that all its strange phenomena were produced by suggestion. They continued to use suggestion therapeutically, but only in the waking state. Before the Great War, the practice of hypnotism was given up in spite of the protests of psychiatrists of the old school and Pierre Janet in particular. This great scientist still considered hypnosis an important psychophysiological condition which included an abnormal degree of suggestibility, and he regarded it as a result of hysterical neurosis.

One of his opponents was Dr Babinski who had formerly been head of Charcot's clinic and had noticed the cheating practised by many of his patients. In 1910 he declared that there was no such thing as induced somnambulism, and that hysteria was not a true neurosis but a tendency to suggestibility. This contradicted Janet's definition and made hypnotism a phenomenon caused by pure suggestion, by 'persuasion'. From this came the word *pithiatism*, the Greek radical *peitho* having a somewhat pejorative sense. Dupré went further, introducing into psychiatry the widespread use of the syndrome of *mythomania*, which attributed to romancing and lying whatever came from the mouths of so-called hysterics. This reinforced the hostile attitude of doctors to all that might have a paranormal character. Even from the therapeutic point of view hypnotism fell into discredit.

These exaggerated views, obviously springing from prejudice, were later corrected. It was recognized that induced somnambulism had as much psychophysiological reality as natural somnambulism, and that it was impossible to explain it by pithiatism. Hypnotism has been rehabilitated and its curative possibilities are again beginning to be recognized. The metapsychists had been indifferent to this medical dispute, their belief in the phenomena produced in these states being unshakeable. These phenomena interested them much more than the methods of obtaining them.

44 *States of Half-Sleep*

Parapsychological phenomena do not occur only in hypnotic trance; they are also observed in ordinary sleep in the form of precognitive dreams which are remembered on awakening. In such cases we must assume that the subconscious has revealed to the conscious mind knowledge drawn from layers far deeper than those considered by Freud in his theory of dreams.

There are other states called 'half-sleep' in which the conditions necessary for psychic occurrences are realized without actual loss of normal consciousness. These are states of introspection, concentration, and detachment from exterior circumstances, sometimes with open eyes, as habitually practised by the Hindu mystics or yogis. The circles which are formed round tables for the development of collective psychic forces are favourable to these states of dissociation and detachment.

In a book published in the days of animal magnetism,¹ Dr Moreau of Tours described states of this kind produced by hashish intoxication and he compared their milder forms with the inspirational states of the artist or scientist. Brière de Boismont² mentioned this subject while writing on hallucinations. He observed that as well as the morbid ecstatic conditions, there are also physiological ecstasies which are not associated with mental disturbance. Modern authors have given examples of these of a more spontaneous kind, in the fields of crystal-gazing and hypnagogic visions. Mrs Leaning's collection³ is composed of such cases, as is the work of Bernard Leroy.⁴ We shall study the psychological theories which have been formed to account for these cases when we discuss the characteristics of hallucinations.

It is sufficient here to note the existence of a light trance in which conscious activity is sufficiently dimmed to allow the subconscious parapsychological activity to work. This is what Liegeois called the 'condition prime', Liebault the '*état de charme*', and Beaunist he '*veille somnambulique*'. Boirac distinguished between the *état de charme* and a lethargic state of simple torpor. Rochas believed he had established the existence of eight states, of which the first was the state of credulity, the second the state of somnambulism, the third the state of *rapport*, etc., separated from one another by lethargic states. These divisions are of course as arbitrary as all the others. Studying Home's trances, for example, one wonders if there may not be a nervous *continuum* which parcels itself out in response to external or internal subconscious suggestions. This would agree with Sollier's physiological hypothesis of a gradually increasing torpor of the brain.

¹ *Du haschisch et de l'aliénation mentale*, de Fortier, Paris, 1845.

² *Des hallucinations* . . . , op. cit., p. 244.

³ *Proc. S.P.R.*, Part 94, Vol. 35, 1925.

⁴ *Les visions de demi-sommeil*, Alcan, Paris, 1926.

45 *Influence of Alcohol and Drugs*

Basing his arguments on the objectivity of somnambulism, Pierre Janet showed how drunkenness and other states of intoxication are related.¹

All experimenters know that alcohol is favourable to the production of phenomena. In telepathic experiments made at the University of Groningen by Heymans, Weinberg and Brugmans,² the proportion of successes rose from 21% to 75% under the influence of a little alcohol, which they explained as caused by the relaxation of inhibition and euphoria.

There may also be a specific action on the nervous centres of the normal brain, for in every age certain drugs have been used to obtain magical, divinatory or hallucinatory phenomena. This is the method that was used by ancient races and is still used by primitive peoples to enter into communication with spirits and obtain clairvoyant phenomena.³ A pharmacologist, Rouhier, described⁴ the plants used for this purpose by the American Indians. He studied especially the Mexican 'peyotl', about which he wrote a curious book.⁵ The active ingredients of this cactus produce a tranquil intoxication with magnificent luminous visions which sometimes include paranormal visions.

A metapsychist qualified in pharmacy, M. Emile Pascal, has written detailed studies on somnambulist and hypnotic states from his long experience, and has tested the action of various sleep-producing drugs: veronal, sulfonal, morphine and chloral, without obtaining any satisfactory results.⁶ He also studied hashish or Indian hemp, which he found gives insight into the subconscious without total loss of normal consciousness, so that memory is retained on awakening, in contrast to the amnesia which follows somnambulism. But the best drug for producing parapsychological states is scopochloralose, derived from scopolamine and chloralose, which produces a state comparable to hypnosis without subsequent amnesia.

In his experiments on extrasensory perception, Rhine found that

¹ *L'automatisme psychologique*, op. cit., p. 79, and *Les médications psychologiques*, I, p. 280.

² *Proceedings of the Copenhagen Conference*.

³ Cf. *Personnages d'au-delà*, op. cit., p. 152.

⁴ *La plante qui fait les yeux émerveillés*, Paris, 1927.

⁵ *Revue métapsychique*, 6, 1928 and 1930.

⁶ *Revue métapsychique*, 4, 1928.

a narcotic, sodium amytal, decreased the faculties of his subjects, and caffeine citrate increased them.

46 *Electrical Study of the Brain*

An Argentinian doctor, Dr Canavesio, has made records of the electrical activity of the brain during parapsychological states.¹ We know that the cortical layers show variations in potential of varying rhythm, that have been called 'brain waves' or Berger's waves, under the mistaken impression that they represented the activity of thought. The various types of 'waves' have been distinguished by four letters of the Greek alphabet. The *alpha* waves have an average frequency of eight to twelve per second; they correspond to the resting state but they disappear during normal sleep and weaker rhythms appear, giving way during deep sleep to the *delta* waves which have a slow rhythm (one to three per second) and considerable amplitude.

Research has been undertaken to distinguish the various forms of sleep, and especially to study the sleep obtained by means of barbiturate drugs. According to Lhermitte² no very precise results have been obtained. We know only that abnormal subjects, and especially epileptics, give abnormal graphs. But some sort of correspondence can be found between the hallucinatory phenomena of peyotl and the form of the electrograph.

Dr Canavesio studied seven psychic subjects in trance. Five gave the same graphs as in normal sleep, and two of the graphs were somewhat irregular but not distinctively characteristic. He concluded that the parapsychological state does not differ from normal sleep, at least from light sleep (Loomis's 2nd stage). The first work of this experimenter was put before the Utrecht Conference, but it is still continuing and it is possible that it may bring to light characteristic differences with other subjects and especially with subjects producing physical phenomena. On the other hand, Lhermitte observes that the *alpha* waves are basic waves which are characteristic of all assemblages of neurones in the animal kingdom. They are sensitive to chemical substances, but it is not certain that they will give insight into the psychic unconscious.

In ignorance of its true characteristics, we may say of the trance

¹ 'L'electroencéphalographie dans les états métapsychiques', Paper No. 57 at the Utrecht Conference.

² Cf. Lhermitte, *Le cerveau et la pensée*, Bloud and Gay, Paris, 1951.

state that it is a *temporary change of mental and nervous condition, of which the characteristics vary with the subject and the method of inducing the trance, but usually culminating in the production of psychic phenomena*. Some séances produce no results; the trance in this case is indistinguishable from an ordinary hypnotic state.

IV. METHODS OF INVESTIGATION

47 *Necessity of the Experimental Method*¹

In spite of the efforts of a few pioneers, psychical research, even dignified by the title of parapsychology, is still in a state of great confusion and empiricism. It has not produced sufficient proof for official recognition. Besides, metapsychists themselves are not in agreement about which facts they consider to be established. They have not yet eliminated a mass of malobservation which, uncritically reproduced by over-credulous writers, leads research astray and gives rise to all kinds of misconceptions. The ground to be cleared is covered with the brambles of superstition.

The facts of clairvoyance have been carefully studied for a hundred and fifty years, medical and scientific committees have examined somnambulists and mediums, and we are still hardly any further advanced than in the time of Louis-Philippe! What is the cause of this extraordinary resistance that cannot even be overcome by the testimony of distinguished scientists? Prejudice certainly, since they do not even take the trouble to come and see the phenomena for themselves. We must recognize that this prejudice would not be so unshakeable among scientists if it were not based on something genuinely scientific, an instinct to mistrust wild flights of fancy and the invasion of the continually reviving occult and supernatural beliefs. Even animal magnetism presented a confused mixture of phenomena which seemed to belong to the realms of charlatanism rather than to science. After many years of sifting, hypnotism emerged. The sifting had been too fine, for magnetism contained even more material of scientific interest. It is this residue that parapsychology must filter anew, with the certainty of deriving from it far superior findings. The task is doubly difficult, because on

¹ I have reproduced, in the following general discussion, part of the paper which we read at the International Paris Conference, on October 1, 1928, on 'Experimental Method in Metapsychics'.

one side the frauds and charlatans still flourish, and on the other religious organizations are making use of these studies as propaganda. What could be more suspect from a modern point of view, with its insistence on fact and aversion to any attempt to confuse the arguments of reason with those of sentiment?

But happily a new day is dawning. Psychical research has begun to eliminate emotional preconceptions, and to close the doors of its laboratories to the pseudo scientific and the religious fanatics who discredit it in scientific eyes; it is at last becoming a true science using experimental methods according to the principles laid down by Claude Bernard.

48 *The Uniformity of Nature*

Is psychical research a science? Undoubtedly, since it studies clearly defined groups of facts. Arguing against its claim, some have maintained that these facts could not be reproduced 'at will and with certainty of success' in a laboratory. This is an invalid objection since it would refuse to consider scientific any results which did not conform to a rigid physico-chemical determinism. In any case there are facts of nature which defy experimental reproduction, by their complexity as well as their large scale (in meteorology, for example). And history should not be rejected as a science because it consists of a succession of unrepeatable facts.

But psychical research, although it is comparable to history in some respects, deals with facts which belong more nearly to psychology and even physiology. The facts may be abnormal, but they are human. And we must ask whether this apparent abnormality does not conceal a conformity to a deeper pattern. It is this which modern parapsychologists are attempting to discover. The abnormalities have laws of their own; they form themselves into natural groups for scientific classification. If they do not lend themselves to quantitative laws, they at least show constant relationships and extend our knowledge of the mind. All subjects produce the same kinds of phenomena, some of which have been assimilated into orthodox science, and the difficulty in assimilating the remainder is no reason for rejecting them. Perhaps one day a unification will be achieved by a change of outlook, by an abandonment of the attempt to relate everything to matter, and to represent everything as form and motion.

Psychical research differs from psychology in being unable to

make use of introspective methods, since the subject is always unconscious or semi-conscious. Thus the investigator has only objective phenomena with which to deal. Also, as the phenomena of psychical research are not all spontaneous but may sometimes be induced, it is necessary to consider methods both of observation and of experiment. We shall discuss the techniques of observation and of direct experiment that have been developed. To reconcile early observations with well-established facts, it will be necessary to discuss first the rules which must be observed when only second-hand evidence is available. The rarity of good subjects and the difficulty of reproducing the phenomena experimentally unfortunately make the indirect method an important one.

49 *Conduct of Enquiries*

Intermediate between direct and second-hand observation is the method of 'enquiries' that has been introduced by English-speaking peoples into psychology and parapsychology. A detailed questionnaire is addressed to the public, usually by means of the Press, and the resulting replies analysed. The most important example of this method was the enquiry begun in 1883 by the S.P.R. into distant apparitions at the time of death, or following it. 5,705 replies were received and classified by Gurney, Myers and Podmore.¹ An important result emerged from this, as it established the reality of hallucinatory telepathy. Flammarion and Richet conducted similar enquiries. But this method, besides its limited scope, has grave disadvantages, because it depends on quantity rather than quality. Ribot states that in using it in psychology it is necessary to be certain of two things: the truthfulness and the competence of those who reply. 'Except in cases where the enquiry is addressed to a clearly defined and therefore restricted public, these factors are indeterminate and one has no means of control over them.'²

This criticism has still more weight in psychical research, where the supernatural character of the facts observed lends itself to error and deception. Even if the replies are definite about the facts, they usually omit information which would be necessary to interpret them. As Ribot also remarks: 'the thorough study of ten persons by ten psychologists is incomparably more useful than the filling in of a hundred signed or unsigned forms.' The case of *Hélène Smith*,

¹ *Phantasms of the Living*, op. cit.

² *De la méthode dans les sciences*, Alcan, Paris, p. 288.

studied by Flournoy, is of greater scientific value than most of the thousands of cases reported without any guarantee of accuracy in the psychic newspapers.

Nevertheless, indirect observation has a certain value, but it must be rigorously analysed before it can be used by science. We cannot accept the methods of authors like Bozzano who collect reports from any published source, regardless of their age and reliability, and use them to justify this or that theory. Each case must be studied on its merits.

50 *Rules of Credence*

The question of the reliability of the narrator is an important one. More credit will be given to a person of good reputation than to a nobody, to a healthy person than to an invalid, and to an educated man than to an ignorant one. If the narrator is a scientist, used to critically observing the messages of his senses, his evidence will be accepted with confidence. Finally, if he is a scientifically-minded specialist in psychical research, his observations and experiences will be taken as proof positive. The opponents of psychical research reject the testimony of a Crookes or a Richet on the pretext that they were victims of 'subjective errors'. This argument is an admission that they are completely ignorant of the conditions under which the phenomena occurred.

We must not place reliance on second or third hand accounts, or on those which have been written from memory long after the event. There are few people, even among the educated and intelligent, who can give an accurate account of a happening which took them by surprise. We recall the experiment in which only a few members out of nearly a hundred at a psychological conference were able to describe correctly a few minutes of rapid action which was made to take place before their eyes. A statement must be drawn up there and then if more or less fanciful omissions, inversions and interpolations are to be avoided. The statement should be detailed and include the place and time, the condition of the subject and the persons present. Schrenck-Notzing had the idea of dictating aloud the various stages of the séance to a tape-recorder. A shorthand note-taker is indispensable in séances for mental phenomena. It was the shorthand record which gave such value to the reports of séances with Mrs Piper and Mrs Leonard.

To confirm the date of a report, which is important when a

prediction has been made, the signatures of those present are sufficient. The document can then be placed with a responsible person or on the files of a learned society. In telepathy experiments, the exchange of postcards immediately after the experiment gives an official date to the documents. Clairvoyants could keep a continuously numbered register of their intuitions and visions.

Photographs of physical phenomena can easily be produced fraudulently. In the absence of other evidence, *no confidence should be placed in a psychic photograph*. If the experimenter is trustworthy, we must enquire whether he has taken sufficient precautions against being the victim of a fraud.

To summarize, the method to be used in studying psychic narratives is the same as that of historical criticism. However, this method must also take account of the verisimilitude of the reported facts in relation to those groups of facts which have already been incontestably established.

51 *General Conditions of Experiments*

Apart from the presence of the subject, spontaneous phenomena do not seem to need any special conditions. But as soon as the attempt to induce them is made, it is seen that they are facilitated by certain physical and psychological conditions which must be taken into account in the investigation. Neglect of them may lead to few results or none at all. Unfortunately these conditions are of a kind which hinder accurate observation and make psychical research the most difficult and disappointing of the experimental sciences.

Tradition, to a certain extent justified by experience, at least in the case of physical phenomena, demands that the medium be seated in a circle of persons in 'harmony'. This term, borrowed from the vocabulary of spiritism, means that there should be among the sitters a temporary community of feeling and perhaps also certain temperamental affinities. It has, indeed, been observed that the presence of certain persons hindered the production of phenomena, either because they were antipathetic to the medium or to another sitter, or because their physiological state prevented the liberation of psychic forces. As soon as they left, manifestations occurred.

The creation of an emotional atmosphere is one of the most important factors in psychical investigations. The spiritists are careful to select the members of their circles, never to change their positions, to

admit strangers as little as possible and never more than one or two at a time, and to open the séances with invocations, hymn-singing and soft music. These practices, which might be considered absurd, have a definite effect and set up the necessary atmosphere.

Failing this religious belief, which is a valuable psychological stimulant, the medium must feel sure of the goodwill and confidence of the sitters. Highly sensitive, mediums perceive intuitively the slightest hostile feeling, and produce no results. And if they know that they are to be examined in the critical spirit of scientific research, they suffer from that inhibition which often afflicts a candidate before the examiner or a speaker before his audience. This explains the failure of the 'official' committees which are set up from time to time to pronounce on the 'miracles' of mediums. Made up of sceptics, sometimes tactless and sneering, they obtain little or no result. They can even, by mental suggestion, initiate fraud by an excessively receptive medium. This difficulty does not seriously circumscribe the investigation, as it is possible to reconcile the demands of science with the special requirements of the phenomena.

During séances, sitters should try to think of nothing, or at least not to concentrate their minds on the medium, although the experimenter should exercise all possible vigilance. Quiet general conversation is desirable. There should be less than ten sitters. Notwithstanding, I have been present at excellent séances with about fifteen. A director should be selected to talk to the medium, put him to sleep and awaken him, if he does not go into trance without assistance, and put to him the necessary questions. The sitters are linked by holding hands. One person may be outside the circle to take notes. The presence of persons whom the medium wishes to please, either from motives of vanity or of sexual attraction, favours the phenomena.

52 *Study of Mental Phenomena*

These are plainly the easiest, as the medium is under the experimenter's eye, in full light, and it is only necessary to ask questions or to supervise what he writes in the trance state. In distant telepathy a witness is necessary who can record the reactions of the subject who is not in the presence of the experimenter. Often the precaution is taken of blindfolding the subject's eyes to prevent his gaining any clue to what he is asked to guess. These precautions have been

carried in modern times to extreme lengths of refinement. In the telepathic experiments at Groningen,¹ in which the subject was asked to indicate on a squared board with forty-eight divisions the symbol suggested mentally by the experimenter, the latter was in an upper room from which he could watch the subject's movements through a glass trap-door.

The study of 'extra-sensory perception' at Rhine's laboratory at Duke, has produced a variety of ingenious arrangements both completely to isolate the subject, and to ensure that the sequences of cards to be guessed are arranged in a strictly chance order.² Machines have even been invented for this purpose as explained in the works of Rhine and in the exhaustive book by Soal and Bateman.³ In 1934, Tyrrell invented a series of five boxes with lids, in each of which a small electric bulb could be lighted at will. The subject had to try to open the box which the experimenter, hidden behind a screen, had selected at random to light up. Later he improved the apparatus to make the choice of target completely random and the recording of data automatic.⁴

In experiments on pure clairvoyance it is obvious that the procedure should be carried out as automatically as possible in order to eliminate the intervention of the experimenter as far as possible. This has been the aim of all modern experimenters following Rhine.

53 *Statistical Methods*

As we have pointed out, card-guessing was used by Charles Richet in the early days of metapsychics, because of the ease of statistical evaluation.⁵ He did not foresee the elaborate developments of this technique which have been inspired by Rhine, nor the mathematical complexities to which this has given rise, in spite of the apparent simplicity of the method.

To explain the principles involved we will start with the tossing of a coin. If it is not biassed, it is as likely to fall heads as tails. The probability of heads is thus one half, and so is the probability of tails. When many successive tosses are made, experience (and also logic) shows that the number of tails is nearly equal to the number

¹ Report of the Copenhagen Conference, op. cit.

² See the photographs in *The Reach of the Mind*.

³ *Modern Experiments in Telepathy*, Faber and Faber, London, 1954.

⁴ *Science and Psychical Phenomena*, Methuen, London, 1938.

⁵ 'La suggestion mentale et le calcul des probabilités', *Revue philosophique*, 12, 1884.

of heads, and the greater the number of tosses, the more the two numbers approximate to equality.

Using cards each bearing one of Rhine's five symbols, the probability of guessing any particular card correctly is one-fifth. At the end of one hundred guesses, for example, assuming the conditions constant, an individual should, if chance alone is involved, guess right about twenty times. If thirty correct guesses are made it is likely that a paranormal faculty is working. If sixty correct guesses are made, the subject is a gifted clairvoyant. One of Rhine's subjects, in an exceptionally successful run, guessed correctly twenty-five times out of twenty-five.

In practice things are not so simple because, with ungifted subjects, the chance number of correct guesses is only slightly exceeded and calculations are necessary to give evidence of the parapsychological faculty.¹

We begin by defining the *deviation* as the difference between the actual number of successes and the number expected by chance. In order to decide whether this deviation is itself the result of chance, when the number of guesses is not very high, it must be compared with a theoretical number called the *standard deviation*, for which the formula is $\sqrt{2np(1-p)}$, where n is the total number of guesses and p the number of successful ones.² The ratio of the deviation to the standard deviation is the *critical ratio*. A critical ratio of +2 is considered good evidence that the results obtained are not due to chance. The probability against it is 200 to 1. This is the standard used by Soal, lecturer in mathematics at the University of London, in his telepathy experiments.

Emile Borel described a critical ratio of ± 1.15 , corresponding to a probability of 1 : 100, as improbable. A critical ratio of 2.30 (prob. 1 : 1,000) is 'very improbable'. A critical ratio of 4.60 (prob. one ten-thousand millionth) is 'practically impossible by chance alone'.

A knowledge of these mathematical expressions will enable the work of the Rhine school to be properly appreciated.

54 Study of Physical Phenomena

It might be said that the only technique necessary in investigating

¹ Cf. Emile Borel, *Éléments de la théorie des probabilités*, Albin Michel, Paris, 1950; *Probabilité et certitude*. Presses Universitaires, Paris, 1950.

² In England the *standard deviation* is $\sqrt{np(1-p)}$, which gives the French standard deviation when multiplied by the square root of 2, which is 1.412.

physical phenomena is that of eliminating fraud. This is a serious stumbling-block which has been used by the opponents of psychical research to discredit it, and has even sometimes discouraged research workers. However, those who persevered have made it possible to continue the study of physical phenomena with much better control conditions using modern apparatus. We may say today that no reasonable person can doubt the reality of physical phenomena.

We must observe that badly interpreted observations have sometimes led to the accusation of fraud. For example, the hair with which Eusapia was accused of raising the scale of a balance by holding it between her fingers. The so-called hair was an ectoplasmic thread, as the experiments and photographs of Ochorowicz and Schrenck-Notzing established with Stanislaw T. The raps, very distinctive and systematic noises produced in the wood of furniture, had been attributed to a voluntary contraction of the fibular tendon. This suggestion was easily reduced to an absurdity. We shall see, when we recount Crawford's experiments on imprints at a distance, how the presence of clay on the medium's shoes was unreasonably taken as evidence of fraud. These traces of clay, on the contrary, allowed the law of the phenomena to be discovered.

The fraud which is practised in teleplasty may be of two kinds; the first is deliberate fraud with the aid of accessories and conjuring tricks. This requires accomplices and concealment in clothing which cannot occur in seriously controlled experiments. As a general rule, the subject is stripped, examined (even the natural orifices, when there is reason to suspect fraud), dressed in garments provided by the experimenter, investigated in a room or laboratory known to the latter, with sitters whom he trusts; the medium being held by the hands and, if necessary, by the feet during the trance. These precautions are sufficient. For demonstration séances, if they have to take place in darkness, the medium can be tied to his controllers and even to all the members of the circle, as Geley did with Gouzyk; it is also possible to pin strips of phosphorescent paper to the medium's clothes along his arms and legs, as Schrenck-Notzing did.

55 *Unconscious Fraud*

There is no question of deliberate fraud if these precautions are carried out by a genuine experimenter.

There remains unconscious fraud which plays a part in trance

psychology, but it is clumsy and easily exposed. It usually involves substitution of hands or the freeing of a foot to produce some telekinetic phenomenon. When the finality of physical phenomena has been recognized, we see that this kind of fraud arises from the confusion in the subconscious mind of the medium of normal and abnormal methods of achieving a desired result. This is an interesting psychological occurrence of which there are many examples. Eusapia was a constant offender. Ochorowicz mentions mediums who struck the wall with their fist or slapped themselves, claiming that it was the spirit. Geley reports the case of Klouski going to switch off the electric light instead of doing it without contact, as he usually did at the beginning of his trance. In all telekinetic movements a corresponding motor act is roughly sketched by the medium, which also shows that the 'spirit' personalities are directed by him. Thus, at a séance given at the University of Naples, a glass standing a considerable distance from Eusapia was thrown with force to the floor, at the same instant that the medium violently kicked one of the sitters.¹

In the remarkable defence of Eusapia which he wrote after the accusations made against her by the investigators at Cambridge,² Ochorowicz showed that verbal or mental suggestion by a suspicious investigator can, in the medium's state of subconscious receptivity, inspire fraud. The suspicious concentration on fraud produces it. When unconscious trickery has been observed, it is best to tell the medium of it frankly when he returns to the waking state. Often a reprimand is followed by improved séances, as if he had been put on his mettle. Ochorowicz advises also not to make the control too stringent at the outset until the stage of muscular automatism is over, which has a false attraction for the inexperienced observer. When experience has been acquired, it will be seen that genuine phenomena have a unique and inimitable character, and that fraud can only occur in strictly defined circumstances.

56 *Is Darkness Necessary?*

Custom demands that physical séances should take place in the dark. This is understandable when luminous phenomena are to be observed; but it must also be remembered that light is a form of physical energy. The ultra-violet rays which it contains affect

¹ *Ann. des sc. psych.*, 1907, p. 650.

² A. de Rochas, *L'extériorisation de la motricité*, op. cit., p. 206.

photographic plates, stimulate chemical combinations and dissociations, are harmful to the germination of plants, and sterilize cultures of microbes. So it may well prevent the occurrence of certain phenomena of materialization which resemble the fragile creation of life. It is a fact that the majority of teleplasts can only work in a dim red light or even total darkness. This is inconvenient for control, and indeed for observation.

However, Richet, Ochorowicz and Dr Ségard, in 1894 at the island of Ribaud, had splendored levitations of a table on a sunny terrace.¹ The literature of psychical research includes many cases where phenomena took place in full day or moonlight, or in artificial light strong enough for the faces of the medium and sitters to be seen. The colour of this light does not matter. We are thus led to suspect that although darkness favours phenomena, it is not indispensable. Crookes insists strongly on this point. All the phenomena which he observed took place in light.²

Darkness seems only to be necessary because of the medium's belief. We shall have to observe more than once, in the course of this book, that most mediums have a spiritist background and since they tend to automatism, they have acquired habits of which it is impossible to free them when a scientific investigation is made. This is why Maxwell recommends that no experiments should be made with spiritist mediums. This seems a very arbitrary exclusion if such mediums are highly gifted. When one is fortunate enough to discover a medium and train him oneself, it is obvious that one should accustom him to working in the light, by using suggestion both when waking and in trance.

Such mediums are rare, or for social reasons do not wish to submit to experiment. So we must consider what precautions to take with mediums who dislike light. When it is impossible to keep even a red lamp alight, phosphorescent screens of sulphide of calcium or zinc are used that have been previously exposed to sunlight and which give a dim glow with a bluish or greenish light. The glow lasts longer with the radioactive sulphides which are easily obtained commercially. The screen is hung head-high, facing downwards, in the centre of the circle. Other movable screens can be left on the table. Following speculative ideas on the identity of psychic lights and the lights produced by certain living animals,

¹ Richet: *Traité de métapsychique*, op. cit., p. 534.

² Crookes, *Researches into the Phenomena of Modern Spiritualism*, op. cit., p. 141.

Geley tried to replace the phosphorescent chemicals by photogenic microbe cultures. As 'organic light' is the result of a chemical reaction which can be reproduced *in vitro* and as two kinds of light differ only by their spectrum, there is little point in adopting this unreliable and inconvenient lighting arrangement.

An important recommendation is never, in dark or dimly-lighted séances, to throw on the medium in trance an unexpected ray of light which may produce a nervous reaction and destroy his powers for some time. We are however in favour of flashlight photography, provided warning is given.

57 *The Laboratory*

Experimental psychology in all countries is now equipped with laboratories and apparatus, often very complicated, allowing measurement of various sensations, perceptions, attention and memory, etc. Parapsychology, which includes the study of physical phenomena, has even more need of a well-equipped laboratory. Since Crookes, Crawford and Grunewald, the range of apparatus has been considerably extended by ingenious instruments designed to establish the reality of 'psychic force', and to record it. The French and Italian observers of Eusapia were outstandingly well-placed to gain access to equipment, on account of their University connections.

Before describing a psychical laboratory, we must forestall an error which is becoming regrettably widespread. In the praiseworthy attempt to remove the mystical or commonplace atmosphere physical or physiological laboratories have been copied; a large bare room has been fitted up, the floor and walls covered with vessels and piles of curiously-shaped instruments made of iron or copper, with photographic dark-rooms and electrical apparatus, etc. When the medium enters such a place, he feels he is entering a surgical clinic or a torture chamber, and this is quite enough to prevent him from producing any results. This is a most serious misunderstanding of the psychology of mediums. To obtain the best from them, it is necessary to win their confidence with pleasant surroundings. A study or a tastefully-furnished room in daily use are the best psychic laboratories.

In order to reconcile this fundamental need with the demands of science, the room should be fairly small and simply furnished, with a scientific appearance. A plain paper, comfortable chairs with an

photographic plates, stimulate chemical combinations and dissociations, are harmful to the germination of plants, and sterilize cultures of microbes. So it may well prevent the occurrence of certain phenomena of materialization which resemble the fragile creation of life. It is a fact that the majority of teleplasts can only work in a dim red light or even total darkness. This is inconvenient for control, and indeed for observation.

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Such mediums are rare, or for social reasons do not wish to submit to experiment. So we must consider what precautions to take with mediums who dislike light. When it is impossible to keep even a red lamp alight, phosphorescent screens of sulphide of calcium or zinc are used that have been previously exposed to sunlight and which give a dim glow with a bluish or greenish light. The glow lasts longer with the radioactive sulphides which are easily obtained commercially. The screen is hung head-high, facing downwards, in the centre of the circle. Other movable screens can be left on the table. Following speculative ideas on the identity of psychic lights and the lights produced by certain living animals,

¹ Richet: *Traité de métapsychique*, op. cit., p. 534.

² Crookes, *Researches into the Phenomena of Modern Spiritualism*, op. cit., p. 141.

Geley tried to replace the phosphorescent chemicals by photogenic microbe cultures. As 'organic light' is the result of a chemical reaction which can be reproduced *in vitro* and as two kinds of light differ only by their spectrum, there is little point in adopting this unreliable and inconvenient lighting arrangement.

An important recommendation is never, in dark or dimly-lighted séances, to throw on the medium in trance an unexpected ray of light which may produce a nervous reaction and destroy his powers for some time. We are however in favour of flashlight photography, provided warning is given.

57 *The Laboratory*

Experimental psychology in all countries is now equipped with laboratories and apparatus, often very complicated, allowing measurement of various sensations, perceptions, attention and memory, etc. Parapsychology, which includes the study of physical phenomena, has even more need of a well-equipped laboratory. Since Crookes, Crawford and Grunewald, the range of apparatus has been considerably extended by ingenious instruments designed to establish the reality of 'psychic force', and to record it. The French and Italian observers of Eusapia were outstandingly well-placed to gain access to equipment, on account of their University connections.

Before describing a psychical laboratory, we must forestall an error which is becoming regrettably widespread. In the praiseworthy attempt to remove the mystical or commonplace atmosphere physical or physiological laboratories have been copied; a large bare room has been fitted up, the floor and walls covered with vessels and piles of curiously-shaped instruments made of iron or copper, with photographic dark-rooms and electrical apparatus, etc. When the medium enters such a place, he feels he is entering a surgical clinic or a torture chamber, and this is quite enough to prevent him from producing any results. This is a most serious misunderstanding of the psychology of mediums. To obtain the best from them, it is necessary to win their confidence with pleasant surroundings. A study or a tastefully-furnished room in daily use are the best psychic laboratories.

In order to reconcile this fundamental need with the demands of science, the room should be fairly small and simply furnished, with a scientific appearance. A plain paper, comfortable chairs with an

photographic plates, stimulate chemical combinations and dissociations, are harmful to the germination of plants, and sterilize cultures of microbes. So it may well prevent the occurrence of certain phenomena of materialization which resemble the fragile creation of life. It is a fact that the majority of teleplasts can only work in a dim red light or even total darkness. This is inconvenient for control, and indeed for observation.

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also set up a 'spirit balance' on a smaller scale, as well as various pieces of electrical apparatus to indicate contacts at a distance. The most recent of these, made by Price,¹ is enclosed in a metal vessel with small holes in it, which are closed with a film of soap and glycerine solution. These films will last for more than an hour and are an ingenious way of ensuring that no one touches the indicator, for the slightest touch would break them. If they are out of the normal reach of the circle, the indicators may be made of two pieces of wood hinged together and held at an acute angle by a light spring. The contacts, which are visible inside, are connected either to the main recording instrument, or to a small red light bulb, or a bell. These contacts are indispensable for the study of levitation. For example, one can use a table with very short legs which rests on the central table by means of electrical contacts. Pugh conceived the idea of placing this in the centre of the main table and surrounding the four sides of the latter with wooden lattice-work.²

Grunewald's photographic recording arrangements are far superior to any others. They consist of a ray of light, coming from a Deprez-d'Arsonval mirror galvanometer, which makes a trace on a sensitive paper unrolling uniformly on a cylinder. In this way the curve of various phenomena, as well as the time, given by a contact clock, can all be recorded on the same paper. Guiding-marks can also be made on this time-curve to indicate critical moments of the séance.

Other instruments which should be included in a psychic laboratory and of which we shall later discuss the uses, are: a gold-leaf electroscope or, better, a quadrant electrometer, some hygrometers, sensitive maximum and minimum thermometers, Joire's 'sthenometer', phosphorescent sulphide screens (preferably radioactive), tubs of modelling clay and paraffin wax (kept liquid by an electric stove) for models, etc. A tape-recorder is useful to record sounds and dictate statements. There are also very convenient dictaphones.

59 *Infra-red Rays*

Approval had long been given to the use of what Dr Gustave Le Bon called 'dark light' to detect teleplastic productions which cannot be studied in ordinary light, save in exceptional cases.

¹ H. Price, *Stella C.*, op. cit., p. 48.

² *Ibid.*, p. 17.

armchair for the medium, pictures or artistic reproductions, bookshelves, flowers, and a piano if desired. In one corner, a traditional materialization cabinet can be set up. This can be made of a curtain-rod set slanting across the corner with a dark curtain hanging from it on rings. The medium will be placed in front of this curtain, under control; never inside the cabinet. Luminous bracelets can be placed round his arms and feet, which can also be tied to the armchair or held by the controllers.

A rectangular table, fairly large and heavy, will stand in the middle of the room. The experimenter will have within reach, under the table, an electric switchboard for the lights, photographic and recording apparatus, etc., so as not to have to move about during the sitting. The combination of different lamps will allow illumination of graduated intensity; red, yellow or white. The lighting should be diffused and not direct. The apparatus should be hidden as much as possible and the recordings made in an adjoining room. The objects used in telekinetic experiments, bell, mandolin, trumpets, etc., should be placed fairly near the medium, on tables or fixed stands, or in gauze cages, at carefully-measured distances. Since side views are indispensable for obtaining a true perspective, at least two synchronized cameras are necessary with electrical control of the shutters and plate-changing. Stereoscopic cameras can also be used. A smoke-absorber should be connected to the magnesium bulb, but it is better to use the new photographic bulbs with internal combustion.

58 *Grunewald's Apparatus*

In a book¹ which was published on the eve of the Copenhagen Conference, dealing with the question of scientific instruments in the psychic laboratory, the Berlin engineer Fritz Grunewald declared: 'In my experience it is quite possible to use laboratory methods to study mediumistic phenomena, repeating the same phenomenon with the same medium as often as necessary and with the variations desired to achieve understanding of it'.

To study the loss of weight by the medium during the trance, the author constructed a weighing-machine with a platform resting on a system of springs, the displacements of which were transmitted by variation in electrical resistance to a recording galvanometer. He

¹ F. Grunewald, *Physikalisch-mediumistische Untersuchungen*, Baum, Pfullingen, 1920.

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² *Ibid.*, p. 17.

Because of its notorious harmfulness, ultra-violet light was first eliminated, in spite of its advantage of rendering fluorescent and therefore visible, the bodies on which it shone. Infra-red light was used as soon as the extent and characteristics of its spectrum were known and it was found how to filter it, detect it by means of a suitable photo-electric cell and record it on photographic plates.

In 1931-32 the Metapsychic Institute at Paris was prepared by the efforts of Eugène and Marcel Osty to instal the necessary apparatus, and experiments were undertaken with the medium Rudi Schneider, who had been studied by Schrenck-Notzing in Munich and by Harry Price in London.¹ An infra-red beam was reflected by several mirrors placed at angles above the table where the phenomena were to be produced. It was directed finally to a box, situated above the séance room, which contained bells and recording apparatus. Every interruption of the beam by the 'substance' given out by the medium was thus recorded. This arrangement worked perfectly and several recordings were made which were in agreement with the medium's statements. It was found that the teleplastic substance absorbed 30% of the beam of light, the absorption being greater for wave-lengths above one millimetre. The Ostys also studied the effect of red light and of Wood's ultra-violet light on these invisible emanations. Henceforward all psychic laboratories designed to study physical phenomena should be equipped with an infra-red projector.

60 *The Psychology of the Investigator*

The technique of observation in psychical research depends to a great extent upon the psychology of the observer himself. He should not be too impressionable, or at least he should possess self-control and presence of mind. He should be good-natured, but at the same time a little sceptical and not credulous. An observer who allows himself to be carried away emotionally by the phenomena, instead of concentrating on the details of their occurrence, is a bad psychical researcher. He will not only fail to advance the science, but will vitiate it by introducing into it badly-described or mistaken facts which will prevent logical interpretations.

Can a good psychical researcher be subject to hallucinations? We may reply boldly that he cannot, if he is a normal man in a

¹ 'Les pouvoirs inconnus de l'esprit sur la matière', *Revue Métapsychique*, 6, 1931, and 1, 1932.

normal state. Hallucinations are disturbances of the mind which occur in madness, drunkenness, hysteria and hypnosis. We must pause to consider this last case for a moment, as it has been suggested that at physical séances the sitters were hypnotized by the medium. We know that at the magical word of the hypnotist, the wooden floor can become a brilliant bed of tulips and plain water turn into delicious aniseed cordial. The subject is told to look at the beautiful face which has been mentally drawn on a piece of blank paper and he duly admires it. He even recognizes it long after, when the blank sheet has been mixed with a stack of similar sheets: this was one of Charcot's experiments. But these hallucinated persons are not normal but hysterics, mentally ill. The Nancy school established that it is impossible to hypnotize a normal man who does not wish to be hypnotized. Even supposing an extraordinarily powerful hypnotist, it is impossible that the subject should not remember the preliminary steps by which he was put to sleep. The observer is certain of retaining his independence of mind in making observations in psychical research. Besides, there are always other witnesses, and the psychiatrists tell us that collective hallucination is impossible. Given a vague cloud in the sky, Hamlet can easily persuade Polonius that this cloud represents in turn a camel, a weasel and a whale; he would have more difficulty in persuading several Poloniuses, but would find it quite impossible to make them believe that there was no cloud at all or that the moon was in the place of the sun. Suggestion can only operate on uncertain ground, and this is not the case with psychic phenomena. But there is no need even to consider such theories, for this notion of the medium influencing the sitters by suggestion is exactly the reverse of what occurs; if there is suggestion at all, it is the medium who receives it from the circle.

61 *Law of Collective Psychism*

Having established this, we must consider whether suggestions made by the experimenter to the medium can modify the results and falsify the facts. In psychological laboratories care is taken to avoid this. The experimenter avoids making suggestions to his subject in the way he puts questions or the tone of his voice; he has to be on the watch for autosuggestion and pretence. Toulouse and Piéron, in their *Technique de psychologie expérimentale*, admit however that there is no certain formula for avoiding hetero-

suggestion from the experimenter. The danger is considerably greater in psychical research, for to the danger of verbal suggestion must be added that of conscious, or even unconscious, mental suggestion. We have already seen this difficulty arising when we discussed fraud. We must now observe that this lies at the very heart of the whole subject of psychical research, so that no phenomena, physical or mental, can be considered as the production of a single individual, but as the production of the subject and of those who surround him, or who are in mental *rapport* with him. This is a function of many variables which may be symbolically represented by the formula $f(S, A, B, C, D, \dots)$, the letters indicating the minds of the subject S and of his sitters A, B, C, \dots .

We note that an analogous formula seems to express the manifestations of energy. The nature of the function f is unknown and indeterminate. It cannot be expressed as a product, as would result from Mackenzie's polypsychic hypothesis. This theory, based on his observations on diatomic molecules, suggests that in psychical occurrences, a new psychological entity is formed by the combination of elements borrowed from the subject and sitters.¹ But in many cases the minds of the sitters play little or no part, and the function seems to reduce to $f(S)$; hence the constancy of certain phenomena which seem to depend only on the subject. Finally we remark that the subject is not only affected by nearby influences. Distant psychic factors P, Q, R , etc. can thus enter into the formula and complicate the causality of the phenomena.

In physics one must, to be rigorous, take into account the influence of the most distant astronomical bodies. This is so small that it may be neglected, so that, without considering the limitations of our senses and measuring instruments, we only approximate to physical laws. Similarly psychic phenomena may depend on more factors than we think. Unfortunately we have no way of discovering these *a posteriori*, and still less of foreseeing them; we can only show the most obvious ones. When the medium tells us for example of facts which he does not know but which are known by a certain person C , we are justified in saying that the formula for this phenomenon is $f(S, C)$, without concluding from this that a new being is involved made up from parts of S and C .

The law of collective psychism, inferred from experience, will be very useful when we study the production of psychic phenomena,

¹ *Metapsichica moderna*, op. cit., p. 276.

especially those similar to table-turning. It will place us particularly on our guard against the results of certain experiments in which a hypnotist was in 'rapport' with a subject. It also tends to invalidate the 'magnetic experiments' of Rochas on the astral body, successive lives, etc.,¹ as proof of the spiritist theory. In the formula $f(S, A)$ which represents them, the factor A , i.e. the experimenter's own mind, with its ideas, beliefs and wishes, dominates the factor S . We shall also apply the law of collective psychism in discussing psychic faculties in animals.

62 *The Idea of the Experimenter*

The law of collective psychism makes psychical experimental work very delicate. Until now the so-called experiments were only induced observation. One sits round a table with a medium and waits for phenomena; it is with difficulty that they can be directed by questions and suggestions, if at all. As Claude Bernard admirably defined it in his *Introduction à la médecine expérimentale*, an experiment consists of the verification of an idea about the nature of things. The experimenter 'forms hypotheses on the causes of what occurs before him and, in order to discover whether the basic hypothesis in his interpretation is correct, he arranges for observations to be made which, logically considered, will provide the confirmation or denial of his idea'.

But the law of collective psychism shows how the observations may tend to confirm the experimenter's idea. As Pierre Janet pointed out in 1889, in hypnotic experiments 'this training of the somnambulist by the hypnotizer is the great danger; we are likely to find that our somnambulists always verify our own theories'.² We may say that this is always so when the theories are associated with emotion. All spiritists produce evidence every day of intervention by spirits. And if the converse is less common, it is because nearly all mediums have a fixed tendency to evoke the spirits of the dead. This tendency is very blunted and only fictitious personalities are produced in the presence of sceptical experimenters. For example: Eusapia with the experts of the General Psychological Institute, Willy S. with Schrenck-Notzing, etc. Ochorowicz obtained *aspiritist* phenomena, or else the personalities who appeared

¹ A. de Rochas, *Les vies successives*, Chacornac, Paris, 1911; Definitive edn., Chacornac-Leymarie, Paris, 1924.

² *L'automatisme psychologique*, op. cit., p. 128.

admitted their fictitious character. But this sowing of ideas by the experimenter in the subject's mind goes much further, because it also includes technical theories. Crawford, who has bequeathed to us such interesting works on 'psychic mechanics', had evidently created in the subconscious mind of his medium these 'invisible agents', who talked and behaved like his zealous tutors at Belfast University. Also the theory of ectoplasm and 'psychic levers' which they gave back to him like a faithful echo, is no more objective than the red and blue phantoms of M. de Rochas,¹ Ochorowicz's X-rays, or M. Cornillier's astral spheres.²

Thus the experimenter's theory cannot be considered verified by his results, as the results will agree with his theory if conditions permit. We cannot even, as Claude Bernard would have liked, 'try to prove the false in order to discover the truth', for the false would become true. It is impossible, for example, to know if blue light is helpful or harmful to materializations; this will depend on the experimenter's opinion, provided that this opinion has been subconsciously received by the medium. This susceptibility of the medium or subject to external mental influences is the basic fact of psychical research. We shall study it in the chapter on telepathy. It gives a rather arbitrary character to phenomena, but experience teaches us that it has many limitations. The study of these limitations brings us back within the scope of ordinary science and permits us to seek constant factors and laws.

63 *Invented Phenomena*

Claude Bernard also advised the experimenter to 'invent phenomena'. He should 'vary or modify natural phenomena and make them appear in circumstances or conditions in which they are not normally found'. In psychical research, nature is the subject's mind, often very primitive, with his character, ideas, and superstitions which must be taken into account in experimenting upon them. Certainly the experimenter can influence him in various ways. He can help and advise him, place him in the desired conditions, and develop his faculty by frequent exercise. It is essential to respect his beliefs. As Lebedzinski said at the Warsaw Conference, if the experimenter should not himself believe in spirits, he should allow his mediums

¹ *L'extériorisation de la sensibilité.*

² J. Ochorowicz, 'Les rayons rigides et les rayons Xx', *Ann. des sc. psych.*, April to December 1910; P. E. Cornillier, 'La survivance de l'âme et son évolution après la mort', *Accounts of experiments*, Alcan, Paris, 1920.

to believe in them. This increases their ability to produce phenomena, as they attribute them to powers greater than their own. They should be treated as psychiatrists treat mad people, encouraging them to believe that they are the Pope or the President, and gaining their confidence so that they are in a better position to analyse their madness. This is a good method but must be used cautiously. Although subjects can be allowed to invoke invisible discarnate personalities, they should be discouraged from acting as ordinary mediums and placing themselves at the disposal of all and sundry to impersonate the father, husband or aunt of their consultants. The ways of the familiar and unique spirit, from Socrates' daemon to Eleonora Zugun's 'Dracu', are also efficient, we must admit. He is a single spirit who is omniscient and omnipotent, not one of a series of spirits who jostle for possession of the medium.

With spiritist mediums we should not fear to invent phenomena which their dogmatists consider sacrilegious, since for them the medium is a missionary with a holy task. We quote for example the experiment of P. Stanley Hall with Mrs Piper, when he succeeded in making her impersonate a fictitious relative named Bessie Beals.¹ The personification round this name was so well constructed that Hodgson, another of this medium's well-known trance personalities, would not admit the fictitious nature of Bessie Beals and insisted that she was really in the land of shades! This experiment was paralleled in London with Mrs Blanche Cooper, by Dr S. G. Soal.² In this case there was no deliberate false suggestion, but the case is the more important that the investigator saw an entirely fictitious personality build up as he observed. He was also lucky enough to converse with one of his friends, thought to be dead, who was really living. In such ways as these the experimental method can be used in parapsychology to bring to the light of day the obscure proceedings of the subconscious.

² *Proc. S.P.R.*, 1925.

¹ Stanley Hall, *Studies in Spiritism*, 1909, p. 254.

PART TWO
PSYCHOLOGICAL PHENOMENA

CHAPTER III

PROSOPOPESIS

64 *Definition*

We shall denote by the term prosopopesis any sudden change, spontaneous or induced, in the psychological personality.¹

Personality depends on the awareness of unity of the conscious self. But reserving for later the philosophical problem this raises, we shall remain for the moment on objective ground. We observe that in certain abnormal circumstances, certain individuals suddenly take leave of their usual personality and assume a completely different one. Memory is lost and character transformed; they have a different name, ideas, tendencies and characteristics. The new personality may know the old, but speak of it as a stranger and sometimes as an enemy. This change may happen accidentally or be produced by suggestion. It may last a few moments or some years. This is no pretence, but a completely authentic phenomenon, known from the earliest times and studied by psychologists for the last fifty years. Today, some of these consider it to be pretence, but that is an extreme view which was not shared by Janet and by several experimenters in France and abroad.

The study of prosopopesis will confirm an important idea that we have already mentioned: the relationship of somnambulistic, hypnotic, hysterical and psychic states. These states are all more or less typified by the same tendency to modification of self. It can be said that they show a 'disintegration' of the personality, but this word should not be understood in too pathological a sense, since divided consciousness occurs with some sane subjects. Finally we should consider disintegration less as a crumbling, a breakdown of mental synthesis, than as a preparation for new syntheses. The phenomenon which interests us, from the psychic point of view, is the appearance of multiple personalities in the human individual.

¹ We have coined this word, similarly to *prosopopoeia*, from the Greek *prosopopoieo*, from *prosopon*, theatrical costume, stage character.

65 *Empirical Classification*

We may divide prosopopesis into two main categories:

1. *Spontaneous* prosopopesis, which is of hystero-somnambulistic origin, and may be considered as a more or less curable mental illness;
2. *Induced* prosopopesis, which is nearly always the result of a suggestion made in the hypnotic state and takes the form suggested by the hypnotist. It can also be produced by auto-suggestion.

Paranormal phenomena may occur in both categories.

At first sight one might think there was an essential difference between the two types. In the first, the personalities which alternate within the same individual are constant and may last for years without noticeable modification. The personalities set up by hypnotic suggestion are, on the contrary, plastic and ephemeral; they change or disappear at the wish of the hypnotist. The personalities concerned in certain psychic phenomena also appear to have no existence outside the trance state and do not usually invade the conscious life of the medium. But the psychological identity of the two categories is shown by intermediate cases.

Normal somnambulistic personalities can be changed and even suppressed by hypnotism. On the other hand, with a somnambulist who shows multiple personality, additional artificial personalities can be brought into being which react upon the original ones and show an analogous nature. Besides this, it has sometimes been possible to strengthen the suggested personalities and give them a consistency which made them altogether comparable to the natural personalities. And with spiritist mediums of a more or less hysterical temperament trance personalities appear, under the name of 'guides' or 'controls', which remain constant for long periods. We shall understand still better the underlying unity of all types of prosopopesis when we consider that the so-called alternating personalities are in fact co-existent personalities which take it in turns to dominate conscious awareness, but which interact in the depths of subconsciousness. To sum up, in all the personalities we shall have to consider we shall find differences of degree and not of kind from the point of view of coherence, complexity, permanency, ease of emergence, etc. There are countless gradations between the

permanent self of the normal man and the more fleeting self of hypnosis or trance.

I. SPONTANEOUS PROSOPOPESIS

66 *Possession*

The phenomena of personality changes are known in history as possession, and cases of this are found in the Bible. St Mark tells the story of a man coming from the tombs, possessed by an unclean spirit. This man broke the chains with which he was fettered and wandered in the mountains, injuring himself. When interrogated by Jesus, he replied that a legion of demons was in him, and he was only freed from them when the exorcism (in modern terminology the suggestion) sent them into a herd of swine. Both pagan and early Christian writers also relate cases of possession, but not until the Middle Ages do we see religious mysticism giving rise to the possession of monks or nuns by devils, often in a kind of epidemic affecting entire convents.

In addition, cases of diabolical possession have been observed in modern times. From the devils of Loudun in the seventeenth century and the convulsionaries of Saint-Médard in the eighteenth, to the somnambulists of the magnetizers and the hysterics of the Charcot school, the phenomenon of personality change accompanied by violent fits has retained the same characteristics through all changes of prevailing superstition. One or sometimes several demons or spirits spoke by the mouth of the afflicted person, in a voice quite different from his own, insulting, blaspheming, inflicting upon him all kinds of ill-treatment and allowing only rare respites to his persecuted personality. We have some very clear descriptions of these phenomena. For example, this is the description which Father de Surin gave of his condition in the history of Loudun (1635): 'I could not explain to you what went on in me at that time, and as this spirit linked itself to my own without depriving me of consciousness, or of the freedom of my soul, but making itself nevertheless into another myself as if I had two souls, one of which is dispossessed of its body and the use of its organs and stands aside watching the actions of the new soul that has entered. . . . When I wish, by the action of one of these two souls, to make the sign of the cross over

my mouth, the other turns aside my hand very quickly and seizes my finger between my teeth to gnaw it with rage'.¹

Instead of being diabolical, possession can be angelic or divine; we then have the cases of ecstasy of which hagiographic literature is full. It is always a question of personality changes. The Church, which in early times admitted the reality of diabolical or mystical possession, has become much more circumspect in modern times in consequence of the knowledge acquired by doctors on the psychology of the subconscious and neuroses. The old ceremony of exorcism has disappeared. It used, however, sometimes to succeed by its suggestive influence.

Apart from the hysterical foundation on which they build, it is indeed suggestion and eventually autosuggestion which explain the apparently spontaneous phenomena of possession. Pierre Janet recorded a striking case in Charcot's clinic.² Under the stress of a serious emotional crisis deepened by remorse, Achille showed all the classical signs of mediaeval possession, even to physical stigmata. It was even by means of these last that he was cured. We shall see later how secondary personalities easily instal themselves in parts of the body affected by psychic anaesthesia, i.e. isolated from the general consciousness.

67 *Alternating Personalities*

Cases of possession display apparently simultaneous personalities, although one might argue that they alternate very rapidly. We shall now study those which show long-term alternation. One of the personalities occupies consciousness and suddenly disappears to make room for another, often completely different. One of the first cases clinically studied was that of Félicité, reported by Dr Azam of Bordeaux.³ Félicité was a young hysteric with a pessimistic outlook, continually preoccupied with her troubles. Almost every day she fell into a deep sleep lasting two or three minutes, at the end of which she awoke transformed. She had become cheerful and even

¹ *Histoire des diables de Loudun*, Amsterdam, 1716. All these cases of possession were reproduced in the *Bibliothèque diabolique*, published from 1882 onwards under the auspices of Charcot. A complete bibliography will be found in the remarkable work by T. K. Oesterreich already mentioned, *Die Besessenheit*.

² P. Janet, *Névroses et idées fixes*, op. cit., p. 377.

³ Azam, *L'hypnotisme et le dédoublement de la personnalité*, Baillière, Paris, 1887, New edn. Alcan, Paris, 1892.

rowdy. She remembered her earlier condition, but considered it abnormal. Sooner or later she relapsed into this first condition in which she retained no memory of the second. This produced complications in her life; having submitted to her fiancé in the second state, she could not understand, in her normal state, the ensuing pregnancy. The second state recurred more frequently and for longer periods as her life proceeded; it was the normal state which became exceptional and the transition periods were reduced to a few seconds. Thus Férida lived all her life as two personalities in the same body.

Subjects with so marked a double personality are not common in the annals of psychiatry, which has given rise to the theory of pithiatism and mythomania; but we know that good psychic subjects are also rare. The Férida case was paralleled by the R.L. case observed by Dufay and de Blois (1845). The secondary personality had direct knowledge of the primary personality, but the reverse was not true. Bourru and Burot reported the Louis Vivé case in which the personality change was even more marked. The secondary personality differed from the first in memory, character, sensibility and movement.

Further interesting cases will be found in the works of Ribot,¹ Binet,² Janet,³ Myers,⁴ Sidis and Goodhart,⁵ Jastrow,⁶ and the Proceedings of the English and American S.P.R. We mention in particular those of Ansel Bourne, Hanna, Brewin, Barnes, etc. The most recent is that of Heinrich Meyer.⁷ We shall limit ourselves to summarizing the typical and well-known cases studied by Morton Prince⁸ and Walter F. Prince.⁹

68 *The Beauchamp Case*

Miss Beauchamp, an hysteric student at Boston studied by Morton Prince, showed as many as four independent personalities, each

¹ Th. Ribot, *Les maladies de la personnalité*, Alcan, Paris, 1884.

² A. Binet, *Les altérations de la personnalité*, Alcan, Paris, 1892.

³ P. Janet, *L'automatisme psychologique*, op. cit.

⁴ F. W. H. Myers, *Human Personality* . . . , op. cit.

⁵ Sidis and Goodhart, *Multiple Personality*, Appleton, New York, 1905.

⁶ J. Jastrow, *The Subconscious*, New York, 1906.

⁷ *Proc. A.S.P.R.*, Vol. 17, p. 217.

⁸ Morton Prince, *The Dissociation of a Personality*, Turner, Boston, 1905.

⁹ Walter F. Prince, 'The Doris case of multiple personality', *Proc. A.S.P.R.*, Vol. 9,

capable of leading a social life of its own, except for the restrictions imposed by the poor health of one of them. The observer, in doubt which of them was the real Miss Beauchamp, gave them numbers. The one which he encountered first was called Number 1. She was very reserved, conscientious, truthful, proud, and showed all the signs of hysteria: aboulia, suggestibility, and limited field of consciousness. In the hypnotic state she gave place to B₂, who had the same tastes and wishes as B₁, but had lost her reserve. 'The hypnotic self is the soul of Miss Beauchamp liberated from the artificial constraints of convention.' Another personality, important in a different way and 'destined to play the central role in the family drama that played itself out for six years', is B₃ which arose spontaneously during hypnosis, and under the name of Sally showed itself to be completely autonomous. This B₃ knew of the existence of B₁ (and of B₂); she spoke of B₁ as a stupid person and spent her time playing tricks on her. B₂ also knew B₁, but did not know B₃. Although she stammered, Sally was extraordinarily gay, carefree and malicious. She rebelled against any suggestion. Various experiences proved that her personality did not alternate with, but was really co-existent with B₁. Finally, after a year, a new personality was born, B₄, who recognized neither Dr Prince nor the place in which she found herself, and who had only an indirect knowledge of the life of B₁. Her mental characteristics were very different from those of this last: she was more courageous, more robust and more normal than B₁. It was strange that B₃ knew all B₄'s actions, but not her thoughts; she nicknamed her 'the Idiot'.

'These three personalities,' said Morton Prince (leaving aside B₂), 'had clearly defined character traits which gave to each of them a completely distinct individuality. One might say that each of them represented certain characteristic elements of human nature and that, taken together, they could be considered as an allegorical representation of the various tendencies of man. If this was not a serious psychological work, I should be tempted to entitle this book: *The Saint (B₁), the Woman (B₄) and the Devil (B₃)*.' More than 500 pages are devoted to the tragi-comic history of the relations between these personalities. The observer's whole preoccupation was to discover which was the real Miss Beauchamp. He discovered one day that in natural sleep B₁ and B₄ became the same person and by hypnosis succeeded in uniting them into a whole which he considered the 'true self'. Sally then disappeared.

69 *The Doris Fisher Case*

The Doris case, studied for a number of years by Franklin Prince, and criticized by Hyslop, has a voluminous literature. The division of personality first appeared when Doris was three years old, as a result of violent emotion and a traumatic experience. The *Real Doris*, D₁, gave birth to the personality *Margaret*, D₂, who became during sleep *Sleeping Margaret*, D₃. D₁ and D₂ were thus two alternating personalities whose difference of character became greater with increasing age. Until the age of ten D₂ was intellectually in advance; then her development stopped and she showed all the signs of backwardness until the day when she disappeared, when Doris was twenty-two. D₂ knew D₁, but was not known by her.

When Doris was sixteen a new emotional experience, the death of her mother, gave rise to a fourth personality, *Sick Doris*, who had complete loss of memory and showed all the symptoms of hysteria. At times she had attacks of catalepsy and lethargy. Then she began to tear her hair and scratch her face, but this was D₂ who was doing so to punish D₄ and make her work. For five years D₁ made only short appearances; twice she saw an hallucination of her mother. A year after the birth of D₄, a fifth personality appeared following a further trauma; this was the *Real Sleeping Doris*, D₅, which lasted for only five years. D₄ disappeared one year before the latter. As for D₂, the character faded more and more and vanished three years after D₄. There remained only D₁ and D₃. The latter was much more independent than the others and seemed to have no elements borrowed from D₁, to whom she played the role of guardian angel. F. Prince seems to accept, after further experiments, made with the help of the clairvoyant, Mrs Chenoweth, that it is a question of a spirit incarnation.¹ This opinion is the more interesting in the light of our general interpretation of mental metapsychics.

II. INDUCED PROSOPOPESIS

70 *Objectivation of Types*

Without having clearly observed the characteristics of the phenomenon, the magnetizers had recognized that their somnambulists often acted like persons possessed. They attributed the illness of the

¹ W. F. Prince, 'The Mother of Doris', *Proc. A.S.P.R.*, Vol. 17, 1923.

latter to mental disturbance and the concentration of thought produced by prayer, fasting and above all by the influence of the exorcisers, which they considered similar to their own. They regarded possession less as a spontaneous phenomenon than as a phenomenon induced by suggestion; but they nevertheless assumed the existence of a nervous and impressionable temperament, otherwise known as a hysterical diathesis.

Braid regarded induced somnambulism as identical in its manifestations with natural somnambulism. It shows the same phenomena of divided consciousness or, in the most advanced form, multiple personality. The new personality may appear spontaneously during hypnosis. We have seen the part played by hypnosis in the Beauchamp case of prosopopesis. Pitres records a case of a patient during hypnosis speaking of herself in the third person, and taking the part of a friend of the waking personality. The new personality may also be created by the experimenter. The magnetizers described how, in the state of *rapport*, it was possible to suggest to the subject that he should become such and such a person: he immediately assumed the corresponding attitude and spoke appropriate words or made gestures with complete sincerity.

The experiments which Richet made in 1882 and which he called 'objectivation of types' showed this feature clearly.¹ When hypnotized, his two somnambulists forgot who and where they were, and became the person suggested to them by the hypnotist. 'Instead of thinking of a type, they realize it and make it objective. This is not like the hallucinated person who is a detached spectator of the pictures which unfold before him; it is like an actor who, gone mad, believes that the play in which he is acting is real, and that he has been changed body and soul into the character he is representing.' Alice became in this way an old woman or a little girl. M. believed herself to be a peasant woman, an actress, a general or a priest. Her face, voice, mannerisms, way of speaking, all changed in an instant and it was impossible to describe, said Richet, the drama of these astonishing and sudden transformations. 'The subject so gets 'under the skin' of his part that his most ingrained natural emotions give way to those required. A timid person becomes bold, a modest one obscene, and an atheist religious. MM. Ferrari and Héricourt have showed that this prosopopesis

¹ *Revue philosophique*, March 1884.

extends to the handwriting,¹ a fact that will be important when we come to consider the spiritist hypothesis.

71 *The Role of the Idea*

For the transformation to affect in this way the emotions and usual motivation, the phenomenon must be less superficial than was thought. This is not merely a comedy taken seriously, depending on amnesia and a heightened imagination. Janet hesitates to liken spontaneous to induced prosopopesis. According to him, in the first case there is a real modification of the state of emotion and memory, in the second this modification is secondary and incomplete. However he admits that one can 'construct by suggestion in suggestible individuals states which are analogous to somnambulisms'.² Binet expresses his opinion even more clearly: 'The division of consciousness which is natural with somnambulists has internal causes, inherent in the very organism of the subject; it is a mental phenomenon expressing a condition of suffering in the nervous centres. It is quite otherwise with a subject whose personality has been transformed merely by suggestion; here the division is the result of an external cause; it is produced by an idea communicated to the subject by another person and consequently it does not usually carry the same weight'.³

It is incontestable that this distinction between the two kinds of prosopopesis has an *a priori* foundation, but it is perhaps no more profound than the distinction made in pathology between a chronic illness and an acute one. The error arises from the misconception of the part played by the idea, which is capable not only of bringing about psychological transformations which are considered superficial, but also the organic changes which were a source of difficulty to Pierre Janet as early as 1889, and of which he again pointed out the importance in 1922.⁴ In the light of the facts of ideoplasty, we shall see that the psychological differences are weakened between the natural somnambulistic and subconscious personalities and those that have been given temporary existence by suggestion. One may argue that it is always by means of an idea that divided consciousness reaches its ultimate form and produces a new

¹ 'La personnalité et l'écriture, essai de graphologie expérimentale', *Revue philosophique*, April 1886.

² *L'automatisme psychologique*, op. cit., p. 165.

³ A. Binet, *Les altérations de la personnalité*, op. cit., p. 233.

⁴ P. Janet, *Les médications psychologiques*, op. cit., p. 160.

personality. Hence the error of modern psychiatry which ascribes these phenomena to pretence.

72 *Regressive Personalities*

A phenomenon intermediate between heterosuggestion and auto-suggestion is given by the cases of Bourru and Burot and of Janet, in which the subjects were made to re-live part of their past lives by evoking an incident and placing them in a familiar attitude of that period. This is in itself a form of personality change, for a young girl of ten is not at all the same person as a woman of thirty. In the experiments in question, not only did the subject recover in minute detail memories and habits of the age assigned to him, but he forgot all his subsequent life. The past is thus never dead in us; it belongs to our subconscious life and can modify our present actions to an unknown extent. This fact explains the illusions which continue to prevail in psychical research, especially those of 'reincarnation'.

This was the mistake made by Rochas when he carried out his famous experiments on regression of memory.¹ He worked with nineteen subjects gifted with 'magnetic sensibility', that is to say more or less somnambulistic. For example Joséphine, a young servant girl of eighteen, was taken back by longitudinal passes to the age of seven. 'I asked her what she was doing. "I am going to school." "Can you write?" "Yes, I am beginning." I put a pen in her hand and she wrote *papa* and *maman* very well. I continued the magnetic passes and took her back to the age of five. "Show us how well you can write." She wrote in syllables *pa pa*. I put a handkerchief into her hand, telling her that it was a doll. She seemed very pleased with it and began to nurse it. She acted just like a little child of that age. More passes; she was probably in the cradle and could no longer talk. I put the end of my finger in her mouth and she sucked it.'

This experiment is in all respects similar to those which Janet carried out with his hysterics named Léonie, Rose and Marie. But Rochas believed in reincarnation, as did his subject. Thus he had the idea of taking the regression even further back. Joséphine very easily traversed the period of gestation, and then went back to a previous incarnation as a man, whose life she described backwards. All the details were probable inventions or related to childhood memories. The descriptions of previous incarnations became

¹ A. de Rochas, *Les vies successives*, op. cit.

increasingly vague, which showed a rather poor subliminal imagination. Poor Joséphine had not the inventiveness of Hélène Smith whom we shall study later, or even that of Janet's Léonie, who would embroider any theme given her with 'the most extravagant complications'. All the similar experiments of de Rochas are indubitable cases of prosopopesis. On account of the psychic element which sometimes entered into them, they will be further discussed in the following section.

III. PARANORMAL ELEMENTS IN PROSOPOPESIS

73 *Spirit Incarnations*

Many psychic phenomena take a spiritist form, i.e. they seem to be due to the spirits of dead persons temporarily reincarnated in the body of a living person. It is in virtue of this belief that the living person concerned is called a *medium*, which means intermediary. During séances the medium falls into a trance; his spirit escapes and his body gives shelter to wandering spirits of the 'astral plane' who speak through his mouth and act in a way that effectively shows a new personality. Impressive to the uninitiated, especially when accompanied by clairvoyance or materializations, these phenomena are too similar to phenomena of possession not to be immediately classed by psychologists among the forms of personality division. But the psychologists have been wrong in rejecting the 'miraculous' accompaniment. Denunciation of 'spiritist superstition' prevented (perhaps fortunately) solution of the other half of the problem. On the contrary William James saw that it was the division of Mrs Piper's personality that released her paranormal faculties: 'Spark, graft, offshoot,' he said, 'in any case mediumistic automatism is a necessary intermediary'.

We shall not yet discuss the spiritist hypothesis. We shall not be concerned therefore with the proofs of identity provided by returning personalities. We shall show here their complete similarity of nature with somnambulistic personalities. The analogy of mediumistic trance and somnambulistic fit, the way in which personalities come and go, their methods of expression, their psychological structure, the amnesia after awakening, and in addition, the clearly artificial character of many spiritist personalities (notably the 'controls') justifies the identification which we shall henceforth take for granted.

From the point of view of the empirical division that we have made between spontaneous and induced phenomena, we must observe that in prosopopesis with psychic elements, the phenomena are mixed. First the subject may be hypnotized or enter trance unaided, then the personalities may be invented by the subject himself or be set up by a verbal or mental suggestion by the persons present. In this way Mrs Piper impersonated the authors of books that Hodgson had recently read: Walter Scott and D. D. Home. But we will not insist on this empirical classification, which has served its purpose of showing us different aspects of prosopopesis.

Spirit impersonations express themselves by speech, writing and drawing, mimicry and those unconscious muscular movements which make tables speak in alphabetic code. In some cases the created personality is external to the subject who hears and sees it; the division of consciousness is complicated by hallucination and this is not a psychic phenomenon properly speaking.

74 *The Case of Hélène Smith*

To Théodore Flournoy, the well-known Genevan psychologist, belongs the honour, in his admirable work on the medium Hélène Smith,¹ of having shown the part played by division of personality in spiritist phenomena. This subject, brought up to believe in spirits and reincarnation, was never hypnotized and had an aversion to the practices of magnetism. 'But,' said Flournoy, 'she does not realize that although avoiding the word she accepts the reality, for her spiritist exercises really consist of an auto-hypnosis which inevitably degenerates into hetero-hypnosis because she comes under the special influence of certain of the sitters.' In good health in the waking state, Hélène showed all the signs of somnambulism (lethargy, catalepsy, anaesthesia and allochiria) during the trance. She had hallucinations and carried out post-hypnotic suggestions.

Like all spiritist mediums, Hélène had a 'guide' or 'control'. The guide, an important person in the spirit world, is at once protector, adviser and stage-manager: it is he who introduces other personalities and dismisses them, though it sometimes happens that he is jostled to one side by rough and uneducated spirits. Hélène's guide was Léopold, a reincarnation of Joseph Balsamo. He spoke through her mouth in a deep man's voice and an Italian accent that 'have nothing

¹ T. Flournoy, *Des Indes à la planète Mars*, Study of a case of somnambulism with glossolalia, Eggiman, Geneva, 1902.

in common with the clear and pleasant timbre of her feminine voice'. He had a very marked individuality and often disagreed with his medium. His writing was quite different from hers and the spelling certainly belongs to the eighteenth century. He held the pencil in a different way from her and they were sometimes in conflict on this point. Sometimes he contented himself with taking possession of a finger to tap out messages or a hand to write them; later he incarnated completely. This incarnation was progressive and culminated with a sort of transfiguration which included the double chin of Cagliostro as well as his Masonic gestures. The attitudes were grave, impressive, almost sacerdotal. Flournoy thought that they were part of the character of Joseph Balsamo as the subconscious imagination of Hélène conceived it, and realized it by autosuggestion.

The two personalities of Hélène and Léopold are not co-extensive: each goes further than the other in certain respects and their common ground consists of Hélène's chief interests. They appear to be simultaneous but, in fact, alternate very rapidly. Osmotic transferences from one to the other occur.

Léopold was not the only somnambulistic creation of Mlle Smith. She created many others in the course of her 'Martian romance', 'Hindu romance', and 'Royal romance'. In particular, she impersonated the Indian Princess Simandini and the French Queen Marie-Antoinette, who were supposed to be two successive previous lives of her own. These prosopopeses are also most remarkable on account of the perfection of the reconstructed personalities. However the writing of the real Queen of France is very different from that which Hélène gave her. There were also many anachronisms in the dramatized stories she told. Flournoy concluded that 'the most famous cases of ambulatory automatism and double consciousness are striking in a quite different way' from that of his subject.

75 *'Deceiving Spirits'*

Hyslop studied¹ a case which is, from the point of view of the verisimilitude of the impersonations, midway between the Smith case and the Piper case which we shall study later. Wife of a clergyman and completely honest, Mrs Smead made up in a somnambulistic state, as Hélène did, a 'Martian romance' which was a sequel to that in Flournoy's book which she had not read. Then

¹ J. H. Hyslop, 'The Smead case', *Proc. A.S.P.R.*, Vol. 12.

various deceased personalities expressed themselves by means of her body. One of them, Harrison Clarke, gave very numerous details confirming his identity. He had been a printer and enlisted in 1862 to fight in the war. He had been killed at the battle of Shiloh in circumstances which he stated precisely. Now these circumstances were found to be quite incorrect on enquiry at the War Ministry. When the somnambulistic personality was reproached with the falsehood, he tried to get out of it by evasions. He said he had certainly deserted from the New York regiment, but it was only to re-enlist under another name in a regiment which enabled him to take part in the battle of Shiloh. Only he vigorously refused to give the name under which he had re-enlisted. In spite of reproaches, he persisted in his refusal and finally disappeared. We can add this prosopopesis to the spiritist dossier, but we are quoting it here to throw light on the psychology of these personalities. Hyslop, who was a spiritist, remarks that the Harrison Clarke personality 'is completely natural and possesses all the attributes of a spirit except for the inaccuracy of its story'. Allan Kardec calls such spirits 'deceiving spirits'. They swarm round mediums.

Flournoy has given some excellent cases of deceiving spirits, including that of Mme Z. and that of M. Til.¹ Mme Z. was a lady of Geneva who had made the acquaintance at a summer resort of a young mystic with whom, in spite of the difference of their ideas, she fell in love with a genuine maternal tenderness. The young man entered an Italian monastery. For her part, Mme Z. devoted herself to spiritism. One day she received by automatic writing a message from the monk announcing his death and giving all sorts of details on his passage to the Beyond. On the following days the communications continued, with many references to their former relationship. But a week later a letter from the monk informed Mme Z. that he was in good health and she gave up spiritism for ever in disgust.

It was also under the influence of spiritism that M. Til took up automatic writing. He immediately found a guide who promised to protect and advise him. This guide revealed to him that his son Edouard had stolen some cigarettes from his employer and would be dismissed. M. Til was upset and went to see his superior, who spoke nothing but good of the young man; but during this interview, the guide made M. Til's finger write: 'I am distressed by the duplicity of this man'. Fortunately Edouard's employer came in and

¹ T. Flournoy, *Esprits et médiums*, Kundig, Geneva, 1911.

cleared him from all suspicion. At once the guide wrote: 'I deceived you Michel, forgive me!' Subsequently M. Til attempted to drive away the evil spirit, but exorcism was only partially successful and the possession continued.

76 *Mrs Piper's Personalities*

In the course of this work we shall have occasion to analyse the changes of personality with various mental and physical mediums. But they are never more clearly characterized than with the nineteenth-century clairvoyant, Mrs Piper, who brought about many striking conversions to spiritism.¹ She had many permanent personalities who first expressed themselves by means of speech, later by writing and even simultaneously by speech and writing. They exerted physical control over three parts of her body: right hand, left hand and vocal organs. The personalities usually expressed themselves indirectly, using the customary guide as interpreter. This artifice, which is common with mediums, relieves them from having to adapt themselves physically to the character personified and is thus in accordance with the law of least effort. One of Mrs Piper's first guides was Dr Phinuit, who claimed to be a French doctor who had lived at Metz. Explaining why he spoke only English, he said that he had forgotten his mother-tongue in contact with his many British patients. This personality was completely fictitious and no Dr Phinuit had ever lived at Metz. It lasted however for years and Phinuit was an indispensable link with all the visitors from the other world, whom he rarely permitted to speak in the first person. When he did, the division of consciousness was complete and he was unaware of what they had said. Then Phinuit passed to a 'higher sphere' and other 'controls' took his place. In 1906, Lodge enquired what had become of him.² His successor undertook to convey to him the kind regards of the scientist. Phinuit was pleased, but stated that he had no desire to return to earth!

One of the fathers of British 'spiritualism', Stainton Moses, had a series of controls with Latin names who identified themselves only vaguely: Rector, Imperator (who inspired 'Spirit Teachings'), Prudens, Doctor, Mentor, etc. Rector was their *amanuensis*,

¹ M. Sage, *Mme Piper et la Société anglo-américaine pour les recherches psychiques*, Leymarie, Paris, 1902.

² O. Lodge, 'Report on some trance communications received chiefly through Mrs Piper', *Proc. S.P.R.*, Vol. 23, Part 58, 1909.

secretary and introducer.¹ On the death of Moses these spirits spoke through Mrs Piper, retaining their differences of character and speech, but taking on changes of nuance which were in some cases very striking. They could not seriously have maintained, Lodge says, that they were identical with the former personalities.

In 1892 Phinuit introduced a new personality: George Pelham, a young writer and philosopher who had died in an accident some weeks previously and whom Mrs Piper had met at one of her séances. Hodgson, the secretary of the American S.P.R., who did not believe in Phinuit, believed in G.P. because of the complicated evidence of his identity which he gave to various sitters, and above all because of 'the union of all these elements into a coherent whole, a single intelligence, and a single character'. It was thus the phenomenon of prosopopesis rather than that of clairvoyance which convinced Hodgson, or rather persuaded him, for he realized that final proof had not been given. At the end of a year the Pelham personality announced that it was 'going away' and would give no further evidence.

77 *Work of William James and Mrs Sidgwick*

After Hodgson's death, in 1905, it was the turn of his spirit to communicate, first using Rector as an intermediary and then directly. William James wrote a brilliant paper on this prosopopesis, which lasted for sixty-nine séances.² He considered Rector a somnambulistic personality of Mrs Piper, while recognizing its 'extremely striking character'. He sketches him as 'an old man, and when he speaks instead of writing, it is with the weak voice of an ecclesiastic, a little weary from his century of experience, indefatigably patient and kind, desirous of putting all his gentleness and wisdom at your disposal so long as you are there . . .'. His capacities as a spiritual adviser were far superior to those of Mrs Piper in the waking state. As for the Hodgson personality, James declared it to be a poor reconstruction, considering the enormous stock of material the medium possessed as a result of her long association with the living original (for years they had seen each other three times a week). However, it seemed to some sitters that their friend was present in the body of Mrs Piper. This personality, James noticed, had lost its spontaneity as time went on and become

¹ Stainton Moses, *Spirit-teaching*, London, 1883.

² W. James, 'Report on Mrs Piper's Hodgson control', *Proc. S.P.R.*, Vol. 23, Part 18, 1909.

mechanical. Its greetings and farewells were unvarying; it came and went like a puppet. 'Whatever it may have been in the beginning, it seemed to me at the end to have "gone its way", leaving a certain stock of impressions on the trance consciousness.' The philosopher's overall impression of the 'Piper-phenomenon' was that it was based on a 'will to personify'. (294)

Studying the fourteen papers and books published on Mrs Piper, Mrs Sidgwick arrived at certain conclusions of considerable interest on the 'psychology of the trance phenomena' produced by the famous Boston clairvoyant.¹ 'The intelligence which communicates directly with the sitter and which is called the control is not, as it claims, an independent spirit making use of Mrs Piper's physical organism, but a phase or element of Mrs Piper's own consciousness.' As for the communicators who express themselves indirectly through the controls, 'there are equally many arguments for refusing to accept these as entities independent of Mrs Piper'.

The only characteristics of these personalities which transcend those of Mrs Piper are their clairvoyant powers, but Mrs Sidgwick does not consider these sufficient proof of the reality of the 'spirits.' Arguing from psychological observations on associations of ideas, memories, peculiarities of speech, and so on, Mrs Sidgwick thinks that the various personalities are successive disguises of the medium's secondary consciousness and do not correspond to real divisions of this consciousness; in other words, they are alternating personalities rather than co-existent ones. We must repeat that the difference between the two types is not so great as might appear. Even if the psychological combinations which make up these personalities do not permanently exist in the subconscious, their blueprints, so to speak, must do so, because on each occasion an accurate reproduction is obtained. Besides, Mrs Piper sometimes produced as many as three simultaneous personalities, expressing themselves by speech and writing.

Among other characteristics which Mrs Piper's prosopopesis had in common with hypnotic prosopopesis, Mrs Sidgwick quotes the dream-like incoherence of the waking stage with its sudden lacunae of memory, as well as the tendency to hallucination in this phase and in the trance proper. Finally Mrs Sidgwick pointed out the part

¹ E. Sidgwick, 'A contribution to the study of the psychology of Mrs Piper's trance phenomena', *Proc. S.P.R.*, Vol. 28, Part 71, 1915.

played by autosuggestion: 'Mrs Piper enters her trance voluntarily with a definite idea that her personality should disappear and give way to various spirits who are to converse with the sitter, give him advice and provide him with contact with the spirit world'. Supported by all necessary references, this paper by Mrs Sidgwick is a psychological masterpiece.

IV. AUTOMATIC WRITING AND TABLE TURNING

78 *Automatic Writing*

New personalities created in an individual express themselves by words, mimicry and writing. These three means of expression show great originality, as we have seen in the cases of prosopopesis discussed, corresponding to an intellectual and emotional transformation of the individual. We shall pay special attention to writing as a means of expression, which is important in psychiatry as well as in psychical research. Although it is called *automatic writing* this is inexact, as it is sometimes a vehicle of expression for a second consciousness which may be richer and more integrated than normal consciousness. Even in the sense in which Janet used it, making a distinction between the creative and conservative activities of the mind, the term *automatism* is unacceptable for an activity which, when the normal personality is absent, is essentially creative in a more or less restricted field of consciousness. *Unconscious writing* would be a much more accurate name for it.

Automatic writing is produced by hysterics and somnambulists, psychic subjects and normal individuals. When there is a completely different personality, it is natural that the handwriting also should be different. Letters written by A_1 and A_2 give the appearance of coming from two separate people, sometimes unfriendly to each other. It is unimportant that in state 1, A does not remember what he wrote in state 2, while on the contrary A_2 knows what has been said and written by A_1 . The essential thing is that each personality is aware of its own autonomy. From this point of view, the various types of prosopopesis, from hysterico-somnambulists to psychic subjects, are exactly the same.

But there are many cases in which there is no apparent change of personality and it is only the writing which reveals it. In this case we may say that the personalities are simultaneous and share the subject's body. The second has control only over the hand, perhaps

obtained by anaesthesia of it or by distraction of the subject's attention. In fact, a personality distinct from that of the subject does not always appear; there may be no more than a division of consciousness. Thus one of Binet's hysterics, seated in the laboratory beside a dripping tap, wrote unconsciously with her anaesthetic hand: 'How irritating that tap is!' In the same way, while Lucie was talking to someone else, Pierre Janet asked her in a low voice if she heard him. Lucie's hand wrote, 'No', without her normal personality noticing. Continuing his conversation with the secondary consciousness, Janet succeeded in turning it into a real personality and even named it Adrienne.

This admirable experiment, in which suggestion completed the process begun by a vague division of consciousness, is very suggestive for the study of spirit personalities. In the same way the exorcizers gave the names of Asmodeus or Beelzebub to the blasphemous personalities of the possessed. Myers quotes a similar experiment in which a man who wrote automatically asked to communicate with a spirit, whereupon one began to write, engaged in facetious conversation, gave itself the romantic name of Clélia and finally declared that it did not exist.¹

Subconscious personalities readily use anaesthetic parts of the body for partial incarnations, but this is not necessary and normal subjects may very well produce 'automatic writing' when they are sufficiently distracted. If someone is given a complicated mental operation to perform which completely absorbs him, it is possible to take his hand and make it carry out a series of movements. This is the beginning of divided consciousness. It should be noted that although the hand is not anaesthetic in this case, it has lost much of its sensibility, as can be seen by using an aesthesiometer. Once again we observe how the psychological disturbances which border on hysteria merge into one another.

79 *Peculiarities of Handwriting*

It was the 'spirits' who spread automatic writing by encouraging their devotees to become writing mediums. Allan Kardec devoted a whole chapter of *The Book of the Mediums* to this subject. He advised seating oneself comfortably with the writing arm free, pencil in hand and a notebook conveniently placed, and then

¹ F. W. H. Myers, 'Automatic writing', *Proc. S.P.R.*, Vol. 3, Part 8, and Vol. 4, Part 11, 1885-87.

invoking 'good spirits' in general. Instead of merely remaining passive, Stainton Moses used to absorb himself in reading or calculation while his hand moved freely. Faith is not indispensable. First a sort of tremor is felt in the hand and arm. Then the hand, moved by an uncontrollable impulse, begins to trace forms. These are at first crude, for the spirits, says Kardec, want to 'loosen the hand'. If these preliminary exercises were too prolonged and became meaningless or ridiculous, he added, it meant that one was in touch with evil spirits and should stop. In psychological language this may be translated: the subconscious elements of the personality are slow in organizing themselves and present the absurd incoherence of dreams. The writing is often large and widely spaced, for 'the spirits are not economical with paper'. When a question does not please them, they reply with a dash. When they do not wish to say any more the hand remains still, but if the spirit has not finished it is impossible to stop the hand moving. 'The medium nearly always has an inner feeling which tells him if the spirit is only resting or has finished.'

Psychologists and physiologists such as Janet, Binet and Gley, who have studied automatic writing, have observed that these phenomena occur in their most highly developed form with hysterics and persons whose consciousness is easily split. A tendency to large writing is found, with curls and spirals made without lifting the pencil. I have studied one subject whose hand continually drew small circles. Even the words of the message which he wrote showed the same signs of automatism. Use is often made of mirror-writing, as well as reversing the order of the letters, anagrams and other peculiarities which spiritists regard as indicating the presence of humorous spirits. I must also mention automatic drawings, which often show an incredibly minute imagination, but an imagination turned in upon itself and functioning in a dream-like way, uncontrolled by the higher faculties of the mind. Of course, the automatism is only obvious in mediocre productions. Leaving aside the psychic faculties, the subconscious mind sometimes creates personalities with a temporary superiority over the normal one.

So *Planchettes and Table Turning*

Automatic writing can sometimes be facilitated by material intermediaries. For example, a small planchette with wheels on which

the medium rests his hand reduces friction and physical effort. This is a refinement of the crude process of communicating with 'spirits' by means of a table which rapped a certain number of times to indicate a letter of the alphabet. An apparatus called a ouija board has also been invented, with the letters of the alphabet printed upon it. The medium's hand rests on a pointer which indicates the letters in order to form a message.

As for the phenomenon of table turning, which is more complex than that of writing because several people are necessary, we have already seen in the Historical Survey the controversy to which it gave rise. This was ended when official science adopted Chevreul's theory of unconscious movements. This theory, first applied to the exploring pendulum, was extended to the divining rod and table turning. The sitters, with their hands on the table, have an idea that it will turn from right to left, for example. Unknown to themselves they exert slight pressures which, taken together, produce the rotation. If their thoughts are not in agreement, their movements cancel out and the table does not turn.

Chevreul found confirmation for his theory in Faraday's experiments which showed how a lateral movement may be unconsciously produced. He placed a pile of small cards held together by thin layers of adhesive between the table and the sitter's fingers, and observed that the cards slid upon one another, the displacement decreasing with the depth below the top card. This showed that it was the hand which caused the displacement of the table. The hand was moving even when the table did not. A second confirmation of this was provided when the sitters placed their hands on a sheet of paper adhering to the surface of the table. A vertical pointer, fixed to the table, indicated the displacement of the sheet. When the pointer was concealed displacement occurred; when it was visible all movement ceased. Therefore Faraday concluded that when the operator could see that he was pushing the table, his tendency was inhibited. Thus the theory of the exploring pendulum was well applicable to tables. As for replies given by a rapping table-foot, Chevreul ascribed these to the unconscious transmission of an idea in the mind of one of the sitters.

It was useless to point out to the ingenious scientist that tables sometimes gave replies which did not conform to the conscious thoughts of anyone present: he denied it, as he denied, with more reason, that tables could give information unknown to any of the

sitters. This phenomenon of prosopopesis which Chevreul had not perceived, was seen in 1855, a year after his death, by an anonymous writer.¹ In a pamphlet called *Lettre de Gros-Jean à son évêque* this author related table turning to somnambulism and was the first to expound the theory of multiple personality. 'The medium,' he said, 'has no conscious awareness of the reply, which is formulated in his mind outside his normal self; he is only informed of it by the movements of the table: the division of consciousness is complete.' Much later, Richet sought a physiological basis for this phenomenon, suggesting that the abnormal self was located in a part of the brain which functioned independently of the normal self. It was Myers and Janet, followed by Binet, who showed by arguing on psychological grounds that table turning, like automatic writing, was a sign of divided personality.

81 *Collective Psychism with Tables*

In fact, table turning is more than just one more form of prosopopesis. It is a question of collective psychism, for it is not a somnambulist personality of the medium alone which makes the table turn and communicate; the contribution made by the other sitters is sometimes more important. From this point of view, this complex phenomenon is one of the most interesting in parapsychology.

The early experiments of Gasparin slightly clarified the problem.² He first studied 'forces in equilibrium'. If a member of the circle is asked to think of a number and the table is to declare it, the other members should not introduce conflict, for example by thinking of a number themselves, which will not usually be the same. But if the first person is the most powerful, the table will give the number he has thought of. Liberation or inhibition of psychic power involves the unconscious production of the same effect on muscular force.

Sometimes the inhibition is very strong; this is what the spiritists call 'the presence of evil influences'. In this way one person can reduce the table to silence or confuse its messages. If he is removed, the phenomena resume. When the sitters are in harmony or a genuine medium is present, impressive results are obtained. The table seems to make human gestures. Gasparin observed this with patience and skill, and described it in his book.

¹ P. Janet, *L'automatisme psychologique*, op. cit., p. 103.

² A. de Gasparin, *Des tables tournantes...*, op. cit. Cf. R. Sudre, *Personnages d'au-delà*, op. cit. Chapter entitled: 'Les visiteurs des tables'.

The information given by tables, sometimes very curious, belongs to the chapter on clairvoyance. While we are still discussing collective psychism, we should mention that the influences at work sometimes come from outside the circle of sitters, although no law of distance is implied. A case in point, given with all the desirable evidential details,¹ is that of a young Dutch boy who was learning his lessons in his room, glancing from time to time through the window at a table-turning circle in the house opposite. He was drowsily learning an English poem. At the same time, a 'spirit', speaking through the table, recited the verses in question as if he was the author of them.

82 *The Jersey Tables*

The spiritist séances which took place at Jersey in the presence of Victor Hugo, between 1853 and 1855, of which we have complete reports,² provide a splendid illustration of collective psychism as it occurs in table turning. The exiled poet had lost his beloved daughter Léopoldine and at Mme de Girardin's suggestion he enthusiastically took up table turning, the fashion for which had just arrived from the United States. It does not seem that the deceased gave such proof of her identity or details on her life in the other world as were supplied later by the son of Oliver Lodge. Apart from certain clairvoyant information (such as the announcement of the death of Mme de Girardin) and thought-reading, the Jersey tables provided little that could properly be called paranormal. But there was much evidence of psychic communion.

As a general rule Victor Hugo did not form part of the circle. He was present at the séance, sitting alone in a corner. It was his son Charles Hugo who asked the questions. The spirits who manifested themselves were always persons whom the poet considered as his peers: Aeschylus, Aristophanes, Plato, Shakespeare, Molière, Byron, Walter Scott, etc. There even appeared Moses, Isaiah, Mahomet and Jesus Christ. They all expressed themselves in verse, in excellent French Alexandrines, whatever their nationality. Their inclination to antithesis, hyperbole, sublime language and richly-sounding verbal effects leads to the assumption that they were all substitutes for Victor Hugo himself. They imitated his highest flights as well as

¹ *Journ. S.P.R.*, December 1923.

² G. Simon, *Les tables tournantes de Jersey*, Conard, Paris, 1923; C. Grillet, *Victor Hugo spirite*, Vitte, Paris, 1929.

his faults. A detailed analysis of these thousands of lines shows the same forms of rhetoric.

Symbolic figures mingled with these great shades: Balaam's ass, Androcles's lion, the Shade of the sepulchre, the White Lady. Even more abstract beings appeared: Thought, Death, Drama, the Novel, Criticism, Humbug, etc. Spiritists do not like to be reminded of these fictional personifications. But psychical researchers find them a striking confirmation of their theories, consisting as they do of naïve prosopopeses and communication of subconscious minds with temporary individuations. The Jersey séances are one of the most valuable contributions ever made to parapsychology.

V. CHARACTERISTICS OF MULTIPLE PERSONALITIES

83 *Stability*

Without anticipating the discussion of the spiritist hypothesis, we are now in a position to state once and for all the complete analogy between different kinds of prosopopesis. In the categories which we empirically distinguished, personalities are found with the same psychological characteristics, which come and go in the same way, with the same morbid symptoms. *A priori* we might see an essential difference between the alternating personality which lasts for months and a personality produced by suggestion which alters at the whim of the operator, but a complete study shows that their differences are only caused by the more or less favourable soil for suggestion provided by the emotional make-up of the subject. An idea, enveloped in suggestion, is the nucleus which initiates crystallization. If the suggestion uses factors in the psychological life of the subject which are strongly dissociated or 'repressed', a well-integrated personality is made; if suggestion is reduced to using normal imaginative factors, the ephemeral personalities of hypnotic and psychic séances will be formed, which seem to vanish at a breath. As with the others, the formation of these latter personalities is usually followed by amnesia on awakening, and their existence is maintained by a constant memory throughout the discontinuities of their duration. It is easy to see that they can be consolidated by use and can acquire an impressive consistency. Beginning as caricatures, they may end as complete portraits. Spiritists know that at the beginning of a personification, the spirit often has difficulty in manifesting himself; they ascribe this to his

difficulty in making use of a new physical instrument. The fact is the same; only the language is different. In his report on Mrs Piper's Hodgson personality, William James points out that the communications gradually gained in conviction during the first days; if the Hodgson personality took shape rapidly, it was because the medium had so many memories to draw upon.

8.4 *Structure*

Personality is made up of memory and character. In prosopopesis there is always division and limitation of memory. As for character, it is better 'constructed' if it borrows more of its elements, organized or not, from the deep levels of the subconscious mind. It is raving personalities which consist of a single obsessional idea, like that of Louis V, described by Bourru and Burot. There are others which show all the signs of psychological health, so much so that they are almost abnormal. It is not necessary to penetrate deeply into psychoanalysis to see in Miss Beauchamp's Sally the repressed impulses which were confined by the studious life led by the Boston neurotic. Flournoy brilliantly analysed the origins of Mlle Smith's personalities, especially that of Léopold. This last represented the deep instincts of modesty and scrupulous honour which had been awakened by the séances of the N. group, at which the proprieties were not always observed. The origin of spirit guides, with their sensitive conventional morality, is similar. The selection of Mlle Smith's other somnambulist personalities, Simandini, Marie-Antoinette, etc., was also determined by her latent inclinations, conditioned by her temperament and reading, her sentimental preferences, and by the contrast between her dream and her dull life at Geneva. 'If she personifies the Hindu princess so wonderfully, it is because ever since childhood she has unconsciously noted and registered everything relating to the East in the myriad observations of every day, as a magnet attracts to itself iron-filings mixed with the dust.' Besides this Flournoy observed that 'none of her somnambulist personalities differs sufficiently from her ordinary personality in its intellectual faculties, moral character, or separation of memory, to justify the hypothesis of spirit possession which is already so difficult to defend in the most famous cases of ambulatory automatism and double consciousness, remarkable in a quite different way from the case of Mlle Smith'.¹

¹ T. Flournoy, *Des Indes à la planète Mars*, op. cit., p. 414.

In spiritist prosopopesis, if the medium was acquainted with the deceased person whom he impersonates, it is the will to personification which synthesizes his memories and makes from them a personality which may show a very convincing resemblance to the original. The penetrating observer may also discern in it certain automatisms, which led Hodgson and Hyslop to say that while communicating the spirits must be in a dream or somnambulistic state, and not in full possession of their faculties. For spiritists, this is a grave admission to make.

85 *Autonomy*

Personalities, either somnambulistic or psychic, may achieve a high degree of autonomy when they possess sufficient character traits. Morton Prince thought that personalities produced by hypnosis were artificial. He admitted his astonishment when he was present at the birth of Sally: 'Far from being the result of a suggestion made by myself, she was born and survived, in spite of my protests and scepticism'. This independence always occurs when the prosopopesis is maintained by a strong emotional condition in the subject. Vanity is one of the most frequent of these emotional conditions. The creation of George Pelham may be attributed to Mrs Piper's intense desire to convince the sceptical Hodgson. It is the subject's instinct of self-preservation that inspires the constant solicitude of the guides who watch over the subject's interests in frequent opposition to the plans of the experimenters: Lodge accepts this interpretation in the case of Mrs Piper.¹ But there are cases in which the subject is persecuted by 'spirits' who represent evil tendencies in his own nature.

The spiritists offer this autonomy of the personalities as a sign of their external origin. Nothing could be more mistaken, and we may say that secondary personalities of whatever kind show the same proportion of independence and suggestibility as ordinary individuals. Among hysterics, Janet states that 'in the same way that the most suggestible individuals sometimes show themselves capable of resistance and spontaneity, so do secondary personalities show themselves sometimes very recalcitrant'.² Nevertheless he established that it is possible to make these secondary personalities do anything whatsoever, if one goes about it in the right way.

¹ O. Lodge, 'Report on some trance communication received chiefly through Mrs Piper', *Proc. Vol. 23, Part 58, 1909.*

² P. Janet, *L'automatisme psychologique*, op. cit., p. 330.

Binet reports a curious case first studied by G. T. W. Patrick,¹ in which a personality developed by means of automatic writing. This personality first said it was called Laton and gave proof of its identity which showed a certain paranormal faculty. Suddenly the experimenter denied this identity: 'Come! Your name is not Bart Laton at all. Your name is Frank Sabine, and you lived at Saint-Louis, and died on 16th November, 1843. Answer me, who are you?' The personality accepted the suggestion and developed it. Certainly he was called Sabine, he was a banker, he was worth 750,000 dollars. The name Laton was his father's. Later he changed the spelling of his name. When he was finally charged with falsehood, he flew into a passion and said that he would lie as often as he liked.

The spiritist incarnations which appear the most autonomous are often the most suggestible; but one should appear to have faith in them and treat them with courtesy and flattery, for they respond readily. It is not infrequent for them to obey suggestions made in a low voice, like ordinary somnambulistic personalities. Even further, it sometimes happened that Mrs Piper slavishly reproduced in her script words spoken by the sitters interpolated in the message from the communicating personality. This type of automatic suggestion is found in nearly all prosopopeses in the initial stage; if the anaesthetic arm of a hysteric is taken and a slight movement given to it, the arm will tend to repeat the same movement indefinitely. With Mrs Piper's personalities it was only a question of a falling back to an earlier stage, that of automatism. But such falling back is common even with the best mediums.

86 *Coexistence and Interaction*

A series of experiments on post-hypnotic suggestions, repeated anaesthesia, etc., have proved that the coexistence of hypnotic personalities is not an uncommon phenomenon. In terms of the old theological distinction, we might say that there is always possession but not obsession. Janet showed that subconscious occurrences in the waking state include memories acquired during somnambulisms; and that during somnambulism memory of all these subconscious acts and emotions is regained. It would be vain to maintain that these memories exist in the dissociated state and not in virtue of personal consciousness. The subconscious mind has a manifest and intelligent activity which it is logical to relate to the personality

¹ A. Binet, *La suggestibilité*, Schleicher, Paris, 1900.

created by suggestion or autosuggestion. Janet's reservation concerning a kind of latent existence of the secondary personality is inconsiderable and does not modify the general conclusion.¹

A confirmation of the fact of co-existence is provided by the communications and interactions which occur between the spontaneous or induced personalities of the same individual. A_1 can influence A_2 or vice versa. This phenomenon is observed throughout psychical research and is another argument in favour of the internal origin of the personalities. For example Mrs Sidgwick showed that the various 'controls' of Mrs Piper had a common stock of memories and identical associations of ideas. The subject gives its own colour to the personalities it creates. Flournoy showed that 'osmotic exchanges' took place between the consciousness of Mlle Smith and that of her guide Léopold. This same osmosis is found with Mrs Piper and all spiritist mediums. When the division of personalities is not complete, the principal consciousness feels that it is mixed with the secondary consciousness. Hypnotic suggestion has succeeded in producing the complete fusion of two personalities. But the aims of the spiritists are diametrically opposed to those of psychiatrists, for they seek to dissociate the psychological life of their mediums rather than to unify it.

¹ P. Janet, *L'automatisme psychologique*, op. cit., p. 336.

CHAPTER IV

TELEPATHY

I. NATURE AND SCOPE OF THE PHENOMENON

87 Definition

Telepathy is the communication of ideas between two individuals without sensory means.

We are using the word 'idea' in the sense of states of consciousness. This phenomenon, which appears throughout psychical research, had already been noted by the early magnetizers. They observed that in the state of *rapport*, their subjects read their thoughts and obeyed orders which they formulated mentally. In 1882 Myers gave the name of telepathy to this phenomenon, and the term was adopted by the English and American S.P.R. He defined it thus: 'The communication of impressions of any kind from one mind to another independently of the recognized channels of the senses'. At this time, it was still called *mental suggestion*, with special reference to the particular case of deliberate transmission. Ochorowicz gave this name to his well documented work.¹ In the attempt to find a name for the phenomenon which did not imply an interpretation of it, Boirac coined the word *diapsychie* (from *dia*, across, and *psyche*, mind), which means 'passing from soul to soul'; but there is no need to abandon the word telepathy, which does not imply a hypothesis because *pathos* means an impression made on the mind.

We must say at once that we dislike the term 'extrasensory perception',² introduced by Rhine and adopted by English writers. This expresses a prejudice about the nature of the phenomenon. As we shall see, the telepathic image does not have the characteristics of a perception; it emerges like a memory from the subconscious mind.

¹ J. Ochorowicz, *De la suggestion mentale*, op. cit.
² E.S.P. in the abbreviated form.

Besides, the transmission of an idea has nothing in common with a perceptive act.¹

88 *Various Forms of the Phenomenon*

Telepathy occurs in many forms and it is difficult to isolate it. It is not usually reciprocal, and acts only in one direction. The first person, who is called the *agent* (*A*), 'transmits an idea' to the second, called the *percipient* (*P*), or we may say that the percipient 'reads the thoughts' of the agent. It is thus only the percipient, at least *a priori*, who is gifted with a psychic faculty.

According to this provisional distinction, the percipient may be active or passive. When he is passive, the transmission may be either voluntary or involuntary so far as the agent is concerned. It may even be unconscious, if the agent is not in the waking state. The percipient also may be in the waking state or in natural sleep, as well as in more or less artificial sleep states (somnambulism, hypnosis, trance, etc.). Many different combinations are possible of which we shall give some examples.

A has an accident and *P* is informed of it in some way, either by a vague feeling, precise knowledge, or by means of an hallucination. The distance between *A* and *P* is sometimes very great.

A writes to *P* and *P* knows he is going to receive a letter.

A and *P* think of the same thing at the same moment.

P dreams that *A* is doing or about to do something.

A tries to send a message to *P*, who expectantly awaits it.

P guesses the cards that have been dealt to *A* and which only he has seen, or the cards which *A* is going to play.

P unconsciously communicates by moving a table the answer to a question which he has 'read' in the minds of one of the sitters.

P has been hypnotized by *A* and experiences the feelings and thoughts which are mentally transmitted to him; he obeys mental orders.

P, in trance, attributes to one of his personalities the information which he draws from the mind of *A*, etc.

Examples could be multiplied of these cases, which are more or less mingled with accessory phenomena, but which all contain the

¹ W. G. Roll, at the Utrecht Conference, stressed the impropriety of Illine's expression in the case of telepathy, which is a grasping by the conscious mind of external mental activity (*Paper No. 53*).

phenomenon of telepathy as their principal element, in varying degrees of intensity.

89 *Telepathy, Telaesthesia and Teleplasty*

It is passive telepathy which is best adapted to giving pure examples of the phenomenon. In active telepathy, the mind of the percipient is not informed of something, it obtains information; and in this sort of reaching out, new possibilities for abnormal awareness are found. The percipient becomes 'clairvoyant', or has 'second sight'. Thus he can obtain information about hidden objects. The early magnetizers recognized that a phenomenon occurred distinct from the transmission of thought. So Charpignon¹ describes among the faculties of somnambulists 'a precise awareness of the sufferings of persons present and absent, and perception in a general and in a definite sense of the thoughts of others', which are clearly telepathic occurrences, and distinguishes from them 'vision at a distance of certain things and events, vision through opaque bodies, etc.' which belong to another faculty, called by Myers *telaesthesia*. Telaesthesia, Myers says, is perception at a distance, when it may be assumed that no mind other than that of the percipient can be the source of the information acquired.²

It would be wrong to classify telepathy immediately as a special case of the more general problem of telaesthesia (or cryptaesthesia, as Richet called it). Clearly mental metapsychics is dominated by a single question, the way in which the mind obtains information without sensory means, but it must be studied logically, classifying the difficulties the better to resolve them. Experiments like those of the S.P.R. and several writers, which consist of an attempt to transmit mentally the idea of an object held in the hands, are badly designed, because they give no information at all whether the mind of the percipient gains its knowledge by telepathy or by telaesthesia. Telepathy should be isolated as far as possible.

There is another confusion that can easily be made. Frequently a normal person has a psychic experience. A woman may see, for example, the apparition of her brother, dripping wet, at the time when he is drowning. The first interpretation of this event was that an idea transmitted to her telepathically gave rise to a mental image

¹ J. Charpignon, *Physiologie, médecine et métaphysique du magnétisme animal*, op. cit., p. 316.

² F. W. H. Myers, *Human Personality* . . . , op. cit., p. 22.

of such intensity that it became a hallucination. Translating the book by Gurney, Myers and Podmore, *Phantasms of the Living*, Marillier imposed this hypothesis on the title of the book, which he turned into, *Les hallucinations télépathiques*. This is an arbitrary inference, for experience shows that not all apparitions are hallucinations, but that they may have an objective existence, caused by the teleplastic faculty of the human individual. Usually, however, it is impossible in spontaneous cases to decide whether it is a question of hallucinatory telepathy or of teleplasty. Telepathic pseudo-perception always occurs without apparent assistance from the senses.

90 *False Telepathy or Cumberlandism*

Having distinguished telepathy from other paranormal phenomena which sometimes accompany it, I must also discuss normal phenomena which give an appearance of being telepathic. Ochorowicz has described them with a perhaps excessive thoroughness.¹ He mentions: mental suggestion by hints, in which the subject guesses normally with the aid of slight signals; mental suggestion by association of ideas, which occurs between two people living the same kind of life: when one idea is explicitly stimulated, the associated idea arises in the two individuals at the same time and gives them the illusion that they are in communication; mental suggestion by magnetic training between a hypnotizer and his subject: sensory and memory hyperaesthesia in this last case allows an arbitrary language to be built up which communicates nothing to the uninitiated.

I shall discuss further the case of false telepathy which depends on unconscious movements. This gave rise to a society game, the *willing game*, which was first exploited in public by Cumberland. An object is hidden and someone's eyes are blindfolded. Taking him by the hand and concentrating attention on the hiding-place, or rather on the movements necessary to reach it, one 'transmits' one's thought to the subject, who finally discovers it. According to the psychologists in 1880, the explanation is the same as that of the exploring pendulum. Nothing happens to the subject, but there is a psychological dissociation in the guide's mind. His conscious mind is wholly focused upon the idea of the place to be reached, and the movements he is making to guide the subject become subconscious, so that he leads him without realizing it, by slight muscular

¹ Ochorowicz, *De la suggestion mentale*, op. cit.

pressures. This is the prevailing explanation and it has the advantage of being accepted also by believers in telepathy, from Ochorowicz to Richet.

I also accept it, but only in a restricted sense and I maintain, as much from personal experience as from analysis of the reports of others, that in the majority of cases the phenomena of Cumberlandism contain an element of genuine telepathy. The orthodox writers admit that among the numerous variants they have studied are some 'curious' cases, which it is difficult to explain by unconscious movements. Janet saw the experiment succeed with a person interposed between the guide and the guesser. He suggests that this person, who did not know the hiding-place, unconsciously repeated the slight movements of the guide.¹

But how are we to explain the cases in which the guide had no contact with the guesser and was content to follow him about a yard behind? How are we to explain that the experiment is not successful with all subjects, but that it succeeds brilliantly with 'sensitives'? Janet concluded that there must be more than an automatic motor impulse in Cumberlandism; he observed an incipient division of personality in the guide and also in the subject who received the impulses subconsciously. Better still, the experiment has been known to fail and the subjects, when hypnotized, to state what they should have done. I must add, in conclusion, that there are many complicated actions which could not be conveyed by muscular movements, and it will then be seen that the majority of experiments in Cumberlandism can only be explained by telepathy. Lodge arrived at this conclusion in 1892. Soal, who studied a sensitive named Marion and was astonished by his exploits, nevertheless declared that no telepathy experiment could be considered satisfactory if the subject saw even a part of the agent's body.²

II. SPONTANEOUS TELEPATHY

91 *Universality of Telepathy*

Once the possibility of telepathy is admitted, it will be seen that it plays a frequent, but fleeting, part in everyday life. When chance and association of ideas have been taken into account, there remains

¹ P. Janet, *L'automatisme psychologique*, op. cit., p. 273.

² S. G. Soal and F. Bateman, *Modern Experiments in Telepathy*, Faber, London, 1954.

a residue which cannot be otherwise explained. Abramowski, whose works on telepathy are so ingenious, considers it a common and universal phenomenon which can be observed with the most various subjects.¹ This may be the first manifestation of the psychic faculty. Nevertheless, if one considered only one's own experience, one might not come to the same conclusion as Vaschide: 'Every day one has a telepathic hallucination, sees or hears or is touched by absent things. In about two per cent of cases it corresponds to reality, and this is sufficient to create a legend. . . . Similarity of intellectual background of the agent and percipient and psychic parallelism explain those rare veridical cases which are not simply fortuitous coincidences'.² But this conclusion which Vaschide prematurely drew from some observations on a very small number of subjects, is not tenable in the light of the immense accumulation of evidence collected, especially by English-speaking workers and above all in the last twenty years. As Bergson pointed out,³ it is not tenable in view of any *single case* of transmission of a complex vision.

The objections based on common associations of ideas of agent and percipient have been discussed by Whately Carington,⁴ who gives much weight to this theory but maintains his scientific certainty of the reality of the phenomena. The association theory was not found by Soal to be confirmed by experience.

92 *The English and French Enquiries*

The transmission of thought was first proved in the hypnotic state by the experiments of the magnetizers. W. Barrett subsequently applied himself to demonstrating it in the normal state (1876-1882) and the early S.P.R. gave it high priority among its researches.⁵ While it was carrying out experimental work, Gurney and Myers started a wide public enquiry to establish spontaneous telepathy. Considering the most striking cases of telepathy to be those which produced sensory hallucinations, they sent out through the Press the following circular: 'Have you ever, since the 1st January 1874, had a clear impression of seeing or being touched by a human being, without being able to relate this impression to any external

¹ Abramowski, *Le subconscient normal*, Alcan, Paris, 1918.

² N. Vaschide, *Les hallucinations télépathiques*, Bloud, Paris, 1908.

³ H. Bergson, *L'énergie spirituelle*, Alcan, Paris, p. 73.

⁴ W. Carington, *Telepathy, an Outline of its Facts, Theory and Implications*, Methuen, London, 1945.

⁵ *Proc.*, Vol. 1, Parts 1 to 4; Vol. 2, Part 5.

cause? Have you ever heard a human voice in the same circumstances? We are only interested in impressions received when you were completely awake'.

Gurney admits that he hoped for 50,000 replies. He received 5,705, which were nevertheless sufficient for statistical conclusions to be drawn. Nearly all came from the intelligentsia. The affirmative replies broke down as follows: sixty-three auditory hallucinations and twenty-three visual hallucinations. From statistical considerations, Gurney deduced that for the theory of chance to be applicable, it would have been necessary for visual hallucinations to be 288 times more numerous, or the population covered by the enquiry to be 288 times as large. Adding to the results of this enquiry all the cases that they had collected elsewhere, Gurney, Myers and Podmore published in 1885 their great work called *Phantasms of the Living*, in which they gave 668 cases of spontaneous telepathy (in 399 approximately coinciding with death) and a few cases of experimental or semi-experimental telepathy.¹ These last are those in which the agent tries to transmit without having warned the percipient.

Ever since this masterly collection, the S.P.R. has continued to examine cases. By 1922, 200 new cases had been published in its *Journal*, of which 170 were spontaneous and thirty experimental or semi-experimental. This new group was classified by Mrs H. Sidgwick² in the same way as the Census, with one exception: she made no distinction between three sub-divisions which Gurney had thought necessary, according to whether the percipient was in the waking state, asleep or half asleep (borderland cases). She thought that this was an artificial distinction, as the psychological nature of the phenomena was not affected by it. We must also mention fifty-two other cases published, either in the *Proceedings of the Society*, or in the books by Podmore³ and Myers,⁴ to do full justice to the great contribution which the S.P.R. made to the study of spontaneous telepathic phenomena, with very high standards which rejected second-hand testimony and conducted a complete investigation into every case.

In 1899, Camille Flammarion made in France an appeal exactly

¹ *Phantasms of the Living*, op. cit.

² Mrs H. Sidgwick, *Phantasms of the Living*, an examination and analysis of cases of telepathy between living persons, printed in the *Journal of the Society* since the publication of the book of Gurney, Myers and Podmore, *Proc. Vol. 33, Part 86, 1922*.

³ Podmore, *Apparition and Thought Transference*, Scott, London, 1894.

⁴ *Human Personality*, op. cit.

similar to that of Gurney and Myers. He received 4,280 replies, 1,824 in the affirmative and 786 sufficiently detailed for publication.¹ These cases were less well verified by the inquirer than the English ones, but they are of the same kind and there is no reason to suspect their genuineness, for they are circumstantial and signed. During the war, Richet conducted an enquiry among the soldiers by the intermediary of the *Bulletin des armées* (January 10, 1917). Among one hundred cases, he found about thirty interesting and seven or eight very remarkable.

93 *Ambiguity of Hallucinatory Telepathy*

In order to form an idea of the many aspects of spontaneous telepathy, one should read the 2,000 cases published in the works we have just mentioned. If one attempts to analyse their most general characteristic, one will find, as did Gurney and Myers, that it is as follows: 'A person (the percipient) finds himself in an unusual state and this state is in relation with no other fact than the exceptional situation of another person (the agent), which is unknown to the first'. These authors and their successors made an error in including hallucination among the 'unusual states', and also in making this almost the only criterion of a telepathic occurrence. At that time there was little belief in physical phenomena, especially in England, and there was only one writer, considerable it is true, Russel Wallace, who supported the objectivity of the apparitions.² The evolution of ideas which took place is well reflected by Richet who, in 1891, when the *Annales des sciences psychiques* was founded, was clearly subjectivist, but later admitted that phantoms could be material. The collections of cases make no distinction between veridical hallucination as understood by Taine, that is, corresponding to a real object; mental hallucination; and more or less vivid internal representation.

In Mrs Sidgwick's more recent work in which the distinction was made, the hallucinatory cases make up thirty-five out of 180, or nearly twenty per cent. It is curious to recall that Gurney was rather tempted to exclude non-hallucinatory telepathy, because of its vaguer character which allowed the mind to reconstruct the experience after the event, and because of the frequency of cases in which the coincidence between the impression and the event is not observed. It is

¹ Flammarion, *L'inconnu et les problèmes psychiques*, Paris, 1900.

² Russel Wallace, 'Etude sur les apparitions', *Ann. des sc. psych.*, 1891.

precisely this which interests us now. We shall discuss the hallucinatory theory of 'phantasms of the living' in the chapter on spontaneous physical phenomena and hauntings.

If one were to draw the conclusion from this mass of documents that phenomena usually occur in a critical circumstance, mortal danger for example, one would be committing the error of begging the question, because of the heterogeneity of the cases classified as similar. Telepathy occurs equally well in the calmest and least dramatic circumstances of life; but it is less noticed. In any case, the interest in spontaneous cases has much declined in modern times, in which a large collection of experimental observations has been made.

94 *Principal Characteristics*

Warcollier, who analysed statistically the results of the great enquiries,¹ thought he could conclude from them that men are better agents than women and conversely that women are better percipients than men; but this conclusion is vitiated by the inadequate number of cases accepted, the confusion that we have pointed out above, the unknown nature of the selective factor in telepathy, and finally by the inequality of the sexes in the production of spontaneous phenomena. This usually depends on a dangerous situation, and it is evident that in normal life men run more dangers than women. To find that the majority of agents are male does not indicate that they have better gifts for it, but that they have more occasion to use them. The rarity of old men among the agents is explained in the same way. Reciprocally, the natural affinity of the sexes makes it likely that a man in danger will think more often of a woman he loves than of a man friend. Only experimental telepathy, giving identical conditions as nearly as possible, would enable us to draw conclusions about relative telepathic ability.

Communication of thought when the agent and percipient are both in the waking state seems to occur, but it is a little less common when one of the persons is awake and the other asleep or half-asleep. Two-thirds of all cases, according to Warcollier, occur between two sleepers. Gurney states that 'his observations on spontaneous telepathy include abundant cases in which the agent was almost unconscious, either sleeping, fainting or dying', from which he concludes that 'spontaneous phenomena seem to depend as little on the intensity of the agent's conscious state as on its unity'. Gurney

¹ R. Warcollier, *La télépathie, étude expérimentale*, Alcan, Paris, 1921.

admits his difficulty, for he cannot easily conceive how *A*'s feeble state of consciousness could induce a hallucination in *P*.

Transmission is usually involuntary, and the psychological theory of the phenomenon will show why. The phenomenon does not appear to depend on distance.

III. EXPERIMENTAL TELEPATHY

95 *Organic 'Sympathism'*

From the point of view of discovering the laws of the phenomenon, spontaneous telepathy is far inferior to experimental telepathy which, without being able to produce it with certainty, can vary ingeniously the conditions in which it is made to occur. Excellent laboratory work has also been done, without any occult or even dramatic atmosphere, using the methods of statistics which render the results scientifically indisputable.

The early magnetizers recognized a 'sympathism' by means of which somnambulists could feel the pains of nearby or distant persons and diagnose illnesses. With persons in *rappor*t with the subject, sympathism was carried to the point of apparent communication of sensations. If the operator put in his mouth a piece of sugar or a pinch of salt, if he drank a glass of medicine or a glass of liqueur, the sleeping subject at once gave signs of these sensations, although his eyes were closed and the operator sometimes out of his presence. It was the same with olfactory phenomena. 'If the person in *rappor*t with the subject,' says Gregory, 'smells a rose, the subject breathes in the delicious perfume; if he sniffs asafoetida, the subject expresses disgust.'¹

Tactile and visual sensations can also be transmitted. Janet quotes the case of a woman subject who sympathetically reproduced all the sensory impressions of her hypnotizer, who was in another room. If he drank, she swallowed; if he pinched his own arm or leg, she was indignant. A burn made her scream horribly, and she showed the exact place corresponding to the operator's wound. Rochas's subjects showed the same phenomenon. Joséphine felt everything that he experienced, 'even when I bite my tongue, which she cannot see', he said.

Ochorowicz quotes many cases of 'organic sympathism':² first

¹ W. Gregory, *Letters to a Candid Enquirer on Animal Magnetism*, Taylor, London, 1851, Definitive edition, 1877.

² *De la suggestion manuelle*, op. cit.

transmission of nervous fatigue, of a state of health, of pain, then of emotions and mental states in general. The early experiments of the magnetizers were resumed by the S.P.R. in 1883. The subject, separated from his operator, described accurately in twenty cases the tactile and gustatory sensations experienced by the latter.

The famous experiments of P. Janet and Gibert, at le Havre in 1885, which were controlled by Myers and Ochorowicz, showed that mental suggestion can operate at a distance. From a distance of two kilometres, a series of actions were suggested to the subject who was a somnambulist aged forty: to go to sleep, go down into the road, and so on. The phenomenon of hypnotism at a distance was spontaneously verified by a striking experiment.¹ In another experiment, Gibert had mentally ordered the subject to open an umbrella at noon the next day and to walk twice round her garden. She carried out the second suggestion, but not the first, because it conflicted with her sense of ridicule at the idea of opening an umbrella in sunshine. Boirac, who stresses this disconnection between the telepathic suggestion and the percipient's reaction, also carried out many excellent experiments of the same kind with young people.² He made subjects enter hypnotic sleep and awake from it, by mental action at a distance. For example, at a social gathering where one of the subjects was present, he joined a group and appeared to be very absorbed in conversation. Suddenly, he sent the mental order to go to sleep. The subject who was quite normal, at the other end of the room, suspecting nothing, went to sleep at once. Ochorowicz reports forty-two analogous experiments.

96 *Experiments by the S.P.R.*

Transmission of ideas, which had been abundantly observed in the phenomena of possession and animal magnetism, was definitely established by W. Barrett's experiment in the waking state; then it was studied with perseverance and thoroughness by the English S.P.R. The committee which it nominated set itself a series of problems which even now are far from being resolved: favourable and unfavourable conditions for percipience, comparative ease of transmission of sensations and thoughts, influence of concentration of thought by the agent, action of many agents, influence of relationship and personal sympathy, state of health of the agent and

¹ *L'automatisme psychologique*, op. cit., p. 136.

² E. Boirac, *La psychologie inconnue*, Alcan, Paris, 1908.

percipient, reproduction of drawings, effect of distance on transmission, effect of obstacles, origin of the telepathic faculty.

The experiments used primarily transmission of cards, drawings and numbers, because of their simplicity. The agent's thought was not a pure representation, it was a perception resulting from the contemplation of an object, and we have already pointed out the ambiguity of this type of experiment which gives no indication whether the abnormal perception occurs by means of telepathy or by telaesthesia. The subject, with his eyes blindfolded and his ears stopped, was seated at a table. The agent stood behind him and gazed at the object, often fixed to a board. Silence was kept and all possible precautions taken to prevent normal communication. Sometimes the agent was in a nearby room, and the distance which separated him from the percipient was as much as ten yards, with two partitions between them. The evidence for thought transmission was nevertheless indisputable. 17,653 experiments were carried out in this way with cards drawn at random from a pack. This form of experiment lends itself admirably to treatment by statistical methods, for there is one chance in fifty-two of drawing a given card. Besides this, drawing at random eliminates the possible influence of *number-habit*, that is the predilection of the agent (known to the percipient) for certain numbers, colours or shapes. The odds against fortuitous coincidences were 109 to 1.

Myers and Gurney attempted transmission of proper names with several subjects. There were striking successes and instructive errors: thus *Freemore* was obtained for *Frogmore*, *Jobson* for *Johnson*, and so on. Gurney also succeeded in obtaining transmissions of two-figure numbers between two sisters. The probability of chance coincidence was $1/10^{35}$. We have seen that this is equivalent to certainty (53).

97 *Transmission of Drawings*

The earliest experiments on transmission of drawings were those of Guthrie.¹ The agent drew a more or less complicated figure which was reproduced with an often astonishing approximation to accuracy by the percipient. The hypothesis of communication by signals is here completely excluded. Some of the reproductions only

¹ M. Guthrie and J. Birchall, 'Record of experiments in thought transference at Liverpool', *Proc.* Vol. 1, Part 4, 1883. Also M. Guthrie, *Proc.* Vol. 2, Part 5 and Vol. 3, Part 9.

contain the general idea of the original. In certain complicated drawings of flowers, the species is named with an indication of the general characteristics. Successes and failures occur in series.

In collaboration with Lodge, Guthrie obtained still more remarkable results with the same percipients. Lodge worked with two agents. One of his experiments is famous: one of the agents looked at the front of a card bearing a square, the other looked at the back on which was drawn a St Andrew's cross. The resulting perception was a square with two diagonals. The percipient, who did not know the conditions of the experiment, had felt that two impressions were mixed and had been tempted to draw the cross outside the square. Lodge observed that inversion was common in the reproductions. He observed also that one agent could be better than the other, that the percipient did not make use of sensory information (failure with a watch which made a clearly perceptible sound), that he felt an 'influence', a 'shiver', when the exact image presented itself.¹

Guthrie was the first to observe the transmission of gustatory impressions and pains with percipients who were not hypnotized.

We should mention also the experiments in transmission of drawings by C. Brück² which were remarkably successful. Certain incomplete reproductions suggest that the telepathic field may be contracted in a way analogous to the defects of vision common among hysterics.

Although not lending itself to statistical treatment, the transmission of drawings is an excellent way to demonstrate the reality and mechanism of telepathy. The improbability of success is, because of the complicated nature of the object, extremely high.

98 *Telepathy in Hypnosis*

Having first made experiments on hypnosis at a distance with Léonie, Janet's subject, Charles Richet noticed that the transmission was retarded by an average of eleven minutes. He had himself a few spontaneous experiences of telepathic perception. He went on to make some very interesting experiments which showed the coexistence of telepathy and tælaesthesia in the phenomena obtained by his predecessors: he succeeded in 'transmitting' to subjects in a

¹ O. Lodge, 'An account of some experiments of thought transference', *Proc. Vol. 2, Part 6, 1884*.

² C. Brück, *Experimentelle Telepathie, Neue Versuche zur telepathischen Uebersetzung von Zeichnungen*, Puttman, Stuttgart, 1925.

hypnotic state drawings which he did not know.¹ Thus it was a question of second sight or clairvoyance on the part of the somnambulists. We will return to this in the next chapter.

Schrenck-Notzing made 300 attempts at transmission of thought in hypnosis (and also in the waking state) at which seventy-five witnesses were present. He tried to guess thought or written words, to open a book at determined pages or to carry out complicated actions. In the experiments least open to the criticism that he was the only person involved, he obtained thirteen correct guesses of drawings out of twenty-five attempts.²

Dr and Mrs Sidgwick carried out a series of impeccable experiments in 1889, with Mr Smith, on hypnotized subjects.³ Mr Smith transmitted each time two numbers selected at random. Of 872 trials, 644 were carried out in the same room, the remaining 228 between two adjacent rooms. The first series gave 117 complete successes and fourteen half-successes (with the numbers reversed), where chance alone would have produced eight successes. In the second series there were eight complete successes and one half-success, compared with two and a half expected by chance.

The experiments extended over three months and it was noticed that there were series of good and bad days (thirty per cent success on the former and five per cent on the latter). The personal equation of the subject was also shown by the decrease of success as time went on, which reflected his loss of interest in the experiments.

We should also mention the similar experiments by the American S.P.R. which claimed to be more rigorous than those of the S.P.R. and which, on favourable days, gave 249 successes out of 450 attempts. The research committee stated that too great a critical faculty in the agent hindered transmission and that the persons present seemed to have an effect on the phenomenon, but that the presence of mental suggestion was clearly shown. Sudden lighting up of the objects did not seem to facilitate the transmission.⁴

¹ Ch. Richet, 'Relation de diverses expériences sur la transmission mentale, la lucidité...', *Proc. S.P.R.* Vol. 5, Part 13, 1888.

² Schrenck-Notzing, 'Experimental studies in thought transference', *Proc.* Vol. 7, Part 18, 1891.

³ H. and E. Sidgwick and G. A. Smith, 'Experiments in thought-transference', *Proc.* Vol. 6, Part 15, 1890.

⁴ *Proc. A.S.P.R.*, Vol. 1, p. 1.

99 *Transmission at Great Distances*

After the experiments of Blair Thaw,¹ of Mrs Sidgwick and Miss Johnson,² and of Rawson,³ the S.P.R. abandoned thought-transmission until the remarkable experiments which confirmed the result of spontaneous observation on the relation of distance to telepathic communication.⁴ These experiments were made by Miss Miles and Miss Ramsden, first 36 and then 700 kilometres apart. Miss Miles was clairvoyant, but she played the part of agent. She sent to her friend, Miss Ramsden, complex thoughts arising from incidents in her daily life. Concentrating on the sunset over Brompton Oratory gave the percipient a mixed impression of crucifixion (cross, bas-reliefs, statue of the Virgin), of rays of sunlight, a hill (the dome of the oratory), etc. A series of such experiments showed evidence of telepathy six times out of fifteen. Descriptions of places being visited by Miss Miles but which were unknown to Miss Ramsden were usually very accurate. The percipient made drawings of her impressions which were compared with postcards or photographs sent after the experiment by the agent. Here is one of their successes: Miss Miles was going to lunch with a Duchess who put on a shepherd's plaid after the meal, and talked successively of her little boy Master, a recent rabbit hunt, greyhounds, herons and retrievers. Miss Ramsden described the house with its Gothic arches; she saw herons, a dying rabbit, firing guns, a woman dressed in a plaid, and a long-legged dog carrying game. Further experiments were made in 1914.⁵

Usher and Burt⁶ carried out experiments between Bristol and London, and then between Prague and London. They concerned the transmission of playing-cards and drawings. Time-lags of between a half and three-quarters of an hour were observed. The experimenters' report showed that the proportion of successes could not be quantitatively decided, but that they could be evaluated by

¹ B. Thaw, 'Some experiments in thought transference', *Proc. S.P.R.*, Vol. 8, Part 23, 1892.

² Mrs Sidgwick and Miss Johnson, 'Experiments in thought transference', *Proc. S.P.R.* Vol. 8, Part 23, 1892.

³ G. Rawson, 'Experiments in thought transference', *Proc. S.P.R.*, Vol. 11, Part 27, 1895.

⁴ C. Miles and H. Ramsden, 'Experiments in thought transference', *Proc. S.P.R.*, Vol. 21, Part 54, 1907.

⁵ *Proc. S.P.R.*, Vol. 27, Part 69.

⁶ *Ann. des sc. psych.*, Jan. 1910.

comparing the originals with the reproductions and the reproductions among themselves. They concluded that the coincidences were not attributable to chance.

Warcollier, who criticized the theory suggested by these writers,¹ himself carried out experiments at a distance, having tried to find new ways of doing them with moving discs, coloured counters, etc. The distance was 800 kilometres, from Paris to Biarritz. The agent J. transmitted in succession an idea, the visual image of an object, and the dynamic image of an attitude. Complete success was never obtained, and there may have been many unknown causes preventing it, such as lack of psychical agreement between the arrangements made by the two experimenters, reception by the percipient of automatic images, etc. But the overall analysis reveals the action of a telepathic *rapport*.

More recently, experiments were made by Whately Carington at Cambridge in correspondence with other workers in Holland, Edinburgh and Northern Carolina. It was the last-mentioned percipients who, despite their greater distance, gave the best results.² Others, between Duke University and Dallas 200 miles away, carried out by Rush and Jensen, produced above-chance results.³ We must also mention the careful experiments of Soal and Mrs Stewart with telephonic control.⁴

100 *Various Experiments*

Kotik, a Russian doctor, carried out interesting and well controlled experiments with two subjects.⁵ Unknown words were difficult to transmit and the nature of the errors showed that the perception was primarily auditive. Transmission succeeded best with the father as agent; however, success was also obtained with a stranger. Mistakes were more frequent at a distance. Successes were obtained through a closed door, but transmission was greatly facilitated by a copper wire from the agent to the percipient (which was introduced because of Kotik's theory about material transmission). The second subject gave replies by automatic writing to questions formulated mentally by Kotik, who succeeded in transmitting perceptions and memories. Clairvoyant phenomena were also produced.

¹ *La télépathie*, op. cit.

² *Proc. S.P.R.*, Vol. 46, 1940.

³ *Journal of Parapsychology*, Vol. 13, 1949.

⁴ *Modern Experiments in Telepathy*, op. cit., p. 278.

⁵ N. Kotik, *Die Emanation der psychophysischen Energie*, Bergmann, Munich, 1908.

Wasielewski¹ and Tischner² worked with a clairvoyant called Mlle de B. The agent looked at the object of which the image was to be transmitted, and the percipient described it as if she saw it more or less vaguely. For example she said of a teaspoon: 'Something bright, round, but elongated in an egg-shape . . .'. Details came gradually, like a photographic negative being developed. Very few trials were completely unsuccessful, even when an object was not used and purely mental images communicated. Transmission of bars of music succeeded very well.

Laboratory experiments took place at the Psychological Institute of Groningen, under the direction of Drs Brugmans, Heymans and Weinberg. The subject was seated, blindfold, in front of a squared board with the columns of squares labelled from A to H, and the rows from one to eight. The experimenters were placed in a room above and a sky-light in the ceiling enabled them to see the board, but not the subject who was hidden by black curtains. They drew a number and a letter from two packs of cards and concentrated on the combination. They also attempted mentally to direct the subject's hand to the correct square. Of 187 experiments, sixty were completely successful, where calculation gave a chance expectation of four successes. When the experiments were carried out in a single room, the number of successes decreased. Alcohol increased the successes again from twenty-six per cent to seventy-five per cent.

Other experiments were carried out by the same workers using psycho-galvanic responses (172). We shall discuss these later, as well as Abramowski's interesting experiments at the Psychological Institute of Warsaw. These rigorous laboratory researches opened a new avenue towards a psychological theory of telepathy.

101 *Collective Telepathy*

In 1920 Warcollier founded a society for telepathic studies of which the principal object was to set up posts for collective experiment. Each post contained two groups each of agents and percipients, about ten persons to a group, placed in two rooms separated by a third, in which was the controller. External percipients, often abroad, concentrated at the same times. The attempt was made to

¹ Wasielewski, *Telepathie und Hellsehen*, Versuche und Betrachtungen über ungewöhnliche seelische Fähigkeiten, Marhold, Halle, 1920.

² R. Tischner, *Ueber Telepathie und Hellsehen*, Experimentelltheoretische Untersuchungen, Bergmann, Munich, 1920, 2nd edn. 1921.

transmit attitudes and visual images (playing cards, the time on a clock-face, printed words, drawings, etc.). Sometimes these last were projected on a luminous screen. Many coincidences were obtained, but usually with the same people. It did not appear certain that the effect of a group of agents is cumulative. Sensations were most successfully transmitted. A sympathetic relationship between agent and percipient did not seem to be necessary. There were good and bad sittings. The long-distance trials (France-America) were more successful than the short-distance ones. A kind of mental contagion between the percipients was observed. At a short distance, connection by a copper wire did not favour transmission. The best agents proved to be also good percipients.

Warcollier's experiments were resumed in 1923, in collaboration with Dr Gardner Murphy of Columbia University, who had also formed groups of telepaths. Sometimes the Paris group sent messages to the New York group, and sometimes the other way round. The results were not very informative. Warcollier noticed, however, that the best results were obtained with American subjects who had been to visit the Paris group. A kind of psychic *rapprochement* had been set up between them.

Gardner Murphy in Chicago (1924) and Woolley and Lodge in London (1927) carried out collective experiments, making appeals on the radio for listeners to receive telepathically messages transmitted by a group of agents. The results were not very striking (150 partial successes out of 24,659 replies to the English wireless appeal). In 1928 Soal started the experiments again with selected percipients. He had some good replies but, according to him, they were not more than would have been expected by chance. Warcollier ascribed this failure to the fact that the percipients were unknown and for communication of ideas a preliminary emotional connection is desirable.

IV. STATISTICAL STUDY OF TELEPATHY

102 *First Experiments*

The first modern statistical experiments on telepathy, with playing cards as the objects to be guessed, were carried out in 1912 by Coover at Stanford University in California.¹ The Professor used about a hundred students and 14,000 trials were made. Each subject

¹ J. E. Coover, *Experiments in Psychical Research*, Stanford University Press, 1917.

had to guess 100 cards of which only half had been seen by the experimenter. This was an attempt to distinguish between telepathy and clairvoyance (107). Extremely prejudiced against the phenomena, Coover required too high a standard of results before he would accept that more than chance was involved, and claimed that in neither case was this standard reached. A critical analysis of his results carried out later by Dr Thouless¹ nevertheless showed that the experiments gave positive results. Besides, as Soal pointed out, he should have selected the most gifted students.²

The S.P.R. undertook similar experiments in London in 1929, carried out by Miss Ina Jephson after consultation with the mathematician Sir Ronald Fisher to establish scales of probability for partial successes (for example, King of diamonds instead of King of hearts). 240 people were asked to guess a card drawn at random from a pack of fifty-two, and to carry out this operation five times in succession with shuffling in between. The same procedure was repeated the next day and the five succeeding days. The results were sent by post, the good faith of the subjects being assumed. Out of 6,000 guesses, 245 were quite exact and there were more partial successes than would have been expected by chance. Repeated under control conditions, these experiments showed no obvious paranormality.³

We must mention that these were clairvoyant experiments, not telepathic ones. But we shall see that as a result of Rhine's work the two categories seem to merge into one.

103 *Rhine's Experiments*

In the United States the first university experiments in telepathy with playing cards were carried out by Dr Estabrooks of Harvard⁴ in 1926. There were 1,660 trials with 938 successes on the colour, which gave an 'extremely improbable' critical ratio (53). The agent and percipient were in separate rooms.

Rhine and his wife began their experiments in 1927 at the Psychology Laboratory at Duke University, under the auspices of the celebrated psychologist W. McDougall who taught there. They replaced the pack of fifty-two cards by a special pack, called a Zener pack, of five cards — star, rectangle, cross, circle and wavy

¹ *Proc. S.P.R.*, Vol. 43, Part 139, 1935.

² *Proc. S.P.R.*, Vol. 38, Part 109, 1928-1929.

³ Besterman, Soal and Jephson, *Proc. S.P.R.*, Vol. 39, Part 118, 1930-1931.

⁴ G. H. Estabrooks, 'A Contribution to Experimental Telepathy', *Boston S.P.R.*, 5, 1927.

lines. Five of these small packs were mixed to give a pack of twenty-five. The shuffled pack was placed face downward on the table, and the cards taken one by one from the top, the subject being asked to guess them. Sometimes the card was seen by the experimenter before the guess, and sometimes not. The strictest precautions were taken against even involuntary cheating.

The results of 85,000 trials carried out with students at the University were published in 1934.¹ The average number of correct guesses exceeded seven out of twenty-five, while the chance average was five. But the average was greatly raised by considering only the best subjects, those who guessed correctly about six to eleven times out of twenty-five. Some had guessed correctly as many as nine times in succession. One day an extraordinarily successful subject, Pearce, guessed twenty-five out of the pack of twenty-five. The improbability of such a success need not be expressed in figures, which would be astronomical.

Rhine attempted to make his experiments rigorous. He hoped to convince the most sceptical. The registration of guesses was made in duplicate by independent observers on numbered sheets and then locked up. As for the experiments themselves, the cards were completely out of sight of the subject. The severest method was to lay the pack face downward on the table and make the subject guess the cards in order from the top downwards, *without anyone touching the cards*.

Rhine's experiments continued until 1940 in the attempt to discover the laws of the phenomena. They established with statistical certainty results which had been noticed in previous qualitative experiments: variation of the extrasensory faculty with the psychological and physiological state of the subject, decline in scoring in prolonged series of trials, bad influence of new conditions or the presence of unwelcome persons, favourable effect of curiosity, stimulation by alcohol or coffee, and of a desire to astonish or to please. Perhaps the most important result came from the attempts to discriminate between pure telepathy and clairvoyance.

104 *The Criterion for Pure Telepathy*

In his post-war book, *'The Reach of the Mind'*,² Rhine made this surprising statement: 'In 1930 we discovered that the telepathy

¹ J. B. Rhine, *Extrasensory Perception*, Bruce Humphries, Boston, 1934. See also by the same author, *New Frontiers of the Mind* (1937) and *Extrasensory Perception after 60 Years* (1940).

² Faber and Faber, London, 1948.

experiments had no real bearing on telepathy'. He meant that the experimental conditions did not exclude the possibility of direct clairvoyant perception of the *objects* which the experimenter was attempting to transmit, for example by looking at a drawing. He forgot that in several cases it was not the idea of the object which was transmitted but some other state of mind or an unconscious preoccupation of the agent. One might suggest that there were more cases of pure telepathy than of clairvoyance in all the early experiments. But it was necessary to differentiate them.¹

Rhine therefore undertook experiments in mental transmission without any material object. The experimenter simply thought of a card and gave the subject a visual signal to guess. He tried to think of the cards in a random order to avoid personal habits and preferences, repetitions of a certain pattern, etc.

His best telepathic subject was a student who had been only slightly successful in the clairvoyant tests. The experimenter was Miss Ownbey. 750 trials gave an average of 14.6 successes out of twenty-five. One day the subject scored twenty-three out of twenty-five. But usually subjects showed the same level of success in clairvoyance and in pure telepathy, when it was possible to distinguish between the two factors. When they were not separated, in 'General E.S.P.' experiments, the results were the same as when either factor was taken separately. Rhine concluded from this that a single faculty was involved and called it 'extrasensory perception'.

V. THE PSYCHOLOGICAL THEORY

105 *Factors to be Considered in a Theory*

Rhine set himself two targets: to prove mathematically the reality of a paranormal faculty and to establish its relationship with other faculties of the mind. It would seem that the first has been satisfactorily achieved. Although the unity of the faculty has been established, the second aim cannot be considered fulfilled. Indeed, we are hardly any further advanced in this respect than when

¹ Rhine expressed surprise that this had not been thought of in half a century of experiments. This was unjust, for I wrote in 1925 in my *Introduction à la métapsychique humaine*: 'It is wise to be cautious because of the uncertainty of the conditions of pure telepathy, without adding more complex clairvoyant phenomena'.

Mrs. Sidgwick read to the Warsaw Conference her admirable paper on 'the need for new experiments in telepathy'.¹

'Why,' she asked, 'does telepathy succeed at certain times and not at others? Does the result depend on qualities and conditions of the agent or of the percipient? Is it affected by the vividness of the impression which the agent attempts to transmit? Or the energy of the impression? Can we speak of energy in this connection? Is it necessary for the agent to think consciously of the idea to be transmitted? Is there any advantage in *willing* the transmission? Is it easier for one agent than another to transmit a certain kind of impression? What is it that is transmitted? Is it the name of the object, or the idea of it, or an image or some such quasi-sensory impression? And *mutatis mutandis* for the percipient. . .'

Mrs Sidgwick asked further what was the mechanism of the transmission from the subconscious mind to the conscious, and the distortion in this communication by inhibitions or mixture with the percipient's own ideas. We do not understand the conditions necessary for success. It is not enough to know that the percipient should be in an enthusiastic and confident mood, and that he should not be tired. We should not rely upon spontaneous cases of telepathy for information. Only well-conducted experiments can give us the facts we need. Even analysis of partial successes will be fruitful.

Unfortunately card experiments do not lend themselves easily to this kind of mental analysis. As G. N. M. Tyrrell remarked,² it needed all Rhine's personal qualities and influence as Professor to interest his students in lengthy and detailed series of guesses of geometrical figures. Another experimenter might well have been less successful. Besides this, the 'all or nothing' guess at a sign does not permit analysis of the subconscious process. Quite different is the process of guessing at a complex figure like a drawing which allows a favourable emotional state. It does not admit statistical assessment but that does not matter when it is no longer a question of convincing sceptics. In spite of the modern infatuation with mass operations, they cannot replace the classical method of individual studies. It is this that will give rise to working hypotheses in this still mysterious region.

¹ 'Experimental telepathy: the need of further experiments', *Compte rendu du Congrès de Varsovie, Paris, 1924*.

² *Science and Physical Phenomena*, Methuen, London, 1938.

106 *What is Transmitted?*

If we were to accept all the conditions that Rhine laid down for pure telepathy, the experiment would be 'not merely difficult in practice, but theoretically impossible,' as W. G. Roll objected at the Utrecht Conference.¹ Rhine, indeed, is prepared to explain a telepathic result as clairvoyant precognition of the results of the experiment. This extension of extra-sensory perception seems as bizarre as it is unfounded. When two persons have the same dream, it is absurd to suggest any other explanation than telepathic communication.

We must admit as an experimental fact that any state of mind can be transmitted: sensations, perceptions and representations, or emotions. We can only ask if the transmission is equally easy in all cases, and if there is predominance or exclusive selection of a certain type. This question is difficult to answer, because a telepathic communication cannot be studied except as a whole, and it is impossible to distinguish the parts played by the agent and the percipient. It is certain that the latter is of considerable importance, so that his psychological reactions must be taken into account. He rejects certain impressions received and modifies others. Hence the contradictory results obtained by experimenters. Lodge found that an abstract idea was more easily transmitted than a drawing. Warcollier on the contrary thought drawings more favourable than ideas or even material objects. There are various opinions about the transmission of colours; however, we know that individuals are more or less gifted in their power to remember shapes, colours and abstract ideas.

In an experiment by Mr and Mrs Newnham, the agent wrote down the question which he formulated mentally. The percipient replied to the question as if he had perceived the idea rather than the visual image of the writing. In one of Mr Guthrie's experiments, the letters of a word were transmitted, but the sense of the word was not understood.² The same thing occurs when the percipient reproduces the various parts of a drawing without recognizing the whole. For example: one of Bruck's experiments³ in which a marguerite was reproduced as two distinct drawings of a belt and a

¹ *Parapsychological Concepts*, Paper No. 53.

² Guthrie and Birchall, 'Records of experiments in thought transference at Liverpool', op. cit.

³ C. Bruck, *Experimentelle Telepathie*, op. cit.

glove. The elliptical shape of the belt and the pointed fingers of the glove corresponded respectively to the centre and petals of the flower.

107 *Experiments in Pure Telepathy*

In the attempt to demonstrate the existence of 'pure telepathy' and to eliminate the possibilities of clairvoyance and precognition, Miss E. MacMahan designed experiments with Zener cards at the Laboratory at Duke University¹ in which she compared the results given by two groups of subjects, gifted and ungifted. These experiments were surpassed by those of Soal and Bateman in London with a better subject, Mrs Stewart.² They used a very refined method, first used in the clairvoyance experiments in 1943. The five cards (bearing letters and not symbols) were spread face upward in front of the agent who had just shuffled them. Then they were turned over without changing the order and at that instant a number between one and five, taken from a list of random numbers (given by tables prepared by mathematicians), appeared as a lighted signal through a hole in a screen. The agent touched the corresponding card with his finger and the percipient made his guess. If the agent looked at the card instead of touching it, the experiment was called telepathic although it was impossible to be sure that clairvoyance did not enter into it.

Soal and Bateman used a code to solve this problem. The letters used in it corresponded to the names of animals which themselves corresponded to five friends of the experimenters who were unknown to the subject. Thus guessing a letter was really to guess an idea and not a material object. Under these conditions Mrs Stewart scored very significantly, the probability of the score being due to chance being $1/10^{11}$.

108 *Prime Importance of Emotional State*

It has been often observed that emotional states were transmitted more easily than intellectual ones, and that the latter, which are never completely pure, were transmitted better when they were more charged with emotion. In spontaneous telepathy, the images transmitted are not purely objective, but usually have strong emotional associations. This is one reason why Abramowski³ said

¹ 'An experiment in pure telepathy', *Journal of Parapsychology*, Vol. 12, 12 — 1946.

² *Modern Experiments in Telepathy*, op. cit., p. 255.

³ *Le subconscient normal*, op. cit.

that only emotional states are transmitted. But this appears to be an arbitrary statement, since it depends on a definition of memory according to which there are no images or ideas in our subconscious minds, but only their emotional equivalents. Since these latter are as finely differentiated as the things themselves, there seems no point in calling them emotional rather than representational, except to establish an organic theory of thought which gives the lie to all metapsychics.

But his ingenious experiments on telepathizing a forgotten fact threw light on the subconscious mechanism involved. In these experiments, carried out at the Psychological Institute of Warsaw, *A* told *P* a list of words, and *P* wrote what he remembered of them. Then *A* concentrated on one of the omitted words and tried to transmit it mentally. Of 324 trials, 154 or nearly fifty per cent were successful. Clearly this is different from the usual type of experiment, as it is a question of arousing a forgotten memory and not of transmitting a new perception. But this is the point Abramowski wishes to make; he suggests that ordinary telepathy does nothing but re-awaken forgotten images by *transmitting an emotional state which determines the selection*. In transmitting an unknown object, the selection will be of an older memory, but it could not set up a completely new combination. 'The telepathic process in its entirety is thus nothing but a process of cryptomnesia.' This identification of telepathic perception with the normal recalling of memories is the most constructive part of Abramowski's theories. It often happens, indeed, that the percipient has the idea transmitted 'on the tip of his tongue' but without being able to express it.

109 *The Effect of Willing on the Part of the Agent*

There is no 'faculty' of willing, but there are 'acts of willing', that is, states of mind which have a particular emotional character and which are accompanied by various motor acts. The intellectual part of these states of mind consists of representations of movements. It is these representations, transmitted to the percipient, which give rise to the action in virtue of the principle formulated by William James: 'every mental representation of a movement stimulates this movement to a certain extent, and stimulates it to the maximum whenever it is not prevented from doing so by some antagonistic idea simultaneously present in consciousness'. This is exactly what happens when suggestions are made to hypnotized subjects. In fact

the finest cases of telepathy have occurred with somnambulists or hypnotized persons. Nevertheless, telepathy is a universal phenomenon if one accepts that the psychic faculty can be stimulated in a normal individual.

When there is no question of carrying out an action, the will to transmit consists in mental attention, that is to say, the maintenance of a state of mind, especially so far as the agent is concerned. Now, as we know, this maintenance is almost impossible, because consciousness is not a collection of discrete states, but a flowing current. Hence the custom in thought-transmission experiments, of replacing the mental representation of an object by continuous visual perception of the object which is placed in front of the agent's eyes. This arose from the belief that a 'strong' state of mind was more easily transmitted than a 'weak' one. This belief also produced the theory that so-called pure telepathy was only clairvoyant perception of an object.

But this assumption is so belied by the facts that we must ask if the act of transmission is indeed oriented from *A* to *P*, and consider anew the general interpretation of passive telepathy. For example, *A* concentrates intensely on an object and *P* perceives, not the image of this object, but an image which preceded or accompanies it. In the experiments of Usher and Burt,¹ *A* tried to transmit the image of a flower, and *P* saw 'a sort of spiral which seems to be moving at the end of a rod'. That day, in fact, *A* had smoked a cigarette during the experiment, which he did not usually do, and had wondered if it would hinder the transmission. In another case, *A* drew a picture of the sun and *P* perceived a spiral. *A* suggested that this error might be due to the presence in his room of a squirrel which was turning incessantly round and round in its cage. Later, when he had forgotten this explanation, he tried to transmit the image of a spiral, and *P* drew a squirrel.

In one of Warcollier's experiments, *A* knelt in an armchair and joined his hands with the intention of transmitting the word *prayer*. *P* received the image of 'a curtain of heavy material and dark colour, right along the wall, not drawn but held back by a curtain-band'. This was a precise description of part of the room in which *A* was, as *P* later verified on the spot. Another time, *A* thought he was transmitting the picture of a harp and *P* received an impression of Italian words. But *A* often heard the harp played by little Italians.

¹ *Ann. des sc. psych.*, op. cit., 1910.

In one of the long distance experiments conducted by Hennique and Desbeaux,¹ *A* concentrated on the stopper of a decanter and *P* received the image of the figure of a dancing Negro which stood near the agent.

'An effort of will is not at all necessary,' said Mrs Sidgwick. In the experiments carried out by Wales and Samuels² the agent made no attempt to transmit particular ideas, but the percipient nonetheless received some of his thoughts and details of events which interested him. Mrs Verrall stated that, in spontaneous cases in which she acted as agent, the two percipients drew from her thoughts which she did not wish to communicate to them. Mrs Sidgwick believed that the voluntary effort merely restricted and gave precision to the idea transmitted, without necessarily increasing its coefficient of transmissibility.

110 *Electivity of Telepathy*

But does the will at least serve to establish a *rapport* between the agent and percipient? This is the problem of the electivity of telepathy. In the cases known as 'semi-spontaneous' *A* gives an impression, by his own will-power, to *P* who is not expecting it. Thus the establishment of mental communication is unilateral. It is only necessary to think of a person with the qualities of a good percipient to reach him telepathically. The experiment may fail, but it has never been clearly observed that the message missed its target and was received by another person. Even better, in completely spontaneous cases, the transmission takes place between two subconscious minds without any preliminary agreement: in these cases *the percipient always has an interest in the thing perceived*, and receives the message in preference to more sensitive, physically nearer, or more closely concerned persons. 'Interception of messages' has been mentioned, but the cases given are not convincing. In the cross correspondences, which we shall study in the chapter on metagnomy, the subjects who shared the same idea were more or less in preliminary agreement. It has not been proved that the relationship between agent and percipient is facilitated by 'family ties'. But sympathy may facilitate it and habit certainly does.

In the chapter on metagnomy we shall study in more detail the question of *rapport* (122). But we must mention at once that it does

¹ *Ann. des sc. psych.*, 1893, p. 115.

² *Proc. S.P.R.*, Vol. 31, Part 8a.

not seem that writers on this subject have paid sufficient attention to a fact of great importance in explaining not only telepathy, but the whole of mental metapsychics. It appears that certain privileged persons have only to call someone mentally in order to enter into communication with him. This call may never impinge on the waking consciousness, occupied with practical actions and the messages of the sense organs, but when once it has reached this mysterious crack into the person's mind it is easier subsequently to regain it, if not to enlarge it.

III *The Effect of Passivity on the Part of the Percipient*

In experimental telepathy the percipient is advised to settle himself comfortably in a quiet room, close his eyes or if necessary blindfold them, and keep his mind as blank as possible. Then he awaits the arrival of images and can resist the associations of ideas which they stimulate. The experimenters at Groningen¹ stated that their subject knew when he had reached this state of passivity, and also recognized the impingement of telepathic communication. He also had a feeling of 'having done his job'. These three subjective impressions would be shown by psychogalvanic reflexes (172).

The transmitted impression reaches first the subconscious mind. Then several things may happen. It may be communicated directly to consciousness (when this is not absent): this is the normal thing. It may be communicated to consciousness but become exteriorized into the form of a hallucination. It may be transmitted with mutilations and distortions. It may be interpreted and arouse either associations of ideas, or a translation into symbolic terms. It may only be communicated to consciousness after a delay of varying length. It may remain unconscious and only its emotional element be perceived as a presentiment. It may not emerge into consciousness and remain in the mental life of the percipient like an impression received by sensory means, but not noticed. These variations do not exhaust the possibilities, but they explain the diversity which is found in telepathic experiences.

Mrs Sidgwick devoted much study to the distortions that the message may undergo in its passage from the subconscious to the conscious mind.² These distortions are especially likely to be

¹ *Compte rendu du Congrès de Varsovie*, p. 96.

² Mrs Sidgwick, 'On hindrances and complications in telepathic communication' *Proc. S.P.R.*, Vol. 34, Part 89, 1923.

produced when the image develops gradually and the development is arrested in the early stages, or when the image does not appear and the subconscious vanity of the individual wishes nevertheless to produce a result. This kind of 'subliminal vanity' is also found in prosopopesis. The percipient's imagination may embroider the impressions received, as when a subject described a scene with a snake-charmer, the transmitted image being 'a snake with a forked tongue'; or when three fish caught on a line was given as a representation of three parallel lines joined by a perpendicular line. The percipient may try to guess the meaning of a confused impression. Finally, he may consciously reject the telepathic impression, because he thinks it absurd or it is not what he expected.

112 *Symbolism in Telepathy*

Symbolism is the usual way for the subconscious mind to impart its contents to consciousness when a powerful tendency or emotion prevents the meaning from being clearly expressed. The misuse which Freud made of this fact in his theory of dreams is well known. He believed that our entire psychic life depended on the *libido* which is the instinct of conservation of the species. Neuroses are the result of the obstacles which social morality places in the way of satisfying sexual wishes. These desires are profoundly repressed by consciousness. In dreams they seek to express themselves, but the 'censor' is still there and they appear in symbolical disguise. Modern psychoanalysts no longer think that all our repressions are sexual in origin. They take into account that the subconscious contains other factors and is subject to external influences of parapsychological kinds. There are telepathic dreams as well as precognitive ones. If they sometimes take symbolic forms, this is not to escape moral constraints, but because of the lack of precision of the paranormal information. When we try to recall something which does not immediately come to mind, the association of ideas gives us equivalents which we translate into more or less adequate images.

It is understandable, then, that the telepathic image, often analogous to a memory (and never to a perception) may communicate itself to the consciousness of the percipient in symbolical form. There are countless examples in the literature of parapsychology. We mention particularly the striking cases of Pascal Forthuny (129). The interpretation of the symbolism is not always evident until

after the event. But it does not require a code so arbitrary as the Freudian one for its interpretation.

113 *Time-Displacements in Transmission*

Comparing the exact time when a message is sent with the exact time of its reception, it is found that there is often a considerable difference between the two. As there is little reason for supposing that this delay occurs at the time of departure, we assume that it occurs on arrival, and this hypothesis is confirmed by experience. The subconscious retains the message and delivers it when favourable conditions arise. This is shown in the common case when two different experiments become mixed. The first experiment does not succeed, or perhaps only fragments of the image are perceived. A second experiment is attempted with a different image, and this time the first image is received.

It may also happen that impressions never emerge, or that they emerge much later on a favourable occasion. In our subconscious minds and especially in those of sensitives, which are unusually receptive and active, there are swarms of impressions, either sensory (received at times of inattention), or extrasensory (received by telepathy), which furnish the raw material for many 'subliminal romances'. This explains to a certain extent how messages could be received from persons after their death, the messages really originating from the period of their life. Gurney and the S.P.R. investigators assumed that this was the case when the delay between transmission and reception was not more than twelve hours.

This 'latency' has been observed by all experimenters, for example by Soal with his gifted subjects Blanche Cooper and Shackleton. He suggested that the agent rather than the percipient might cause the delay.¹ The essential point, however, is that the passage from subconsciousness to consciousness is not instantaneous. This provides an explanation of the curious 'displacement' effects which Carington observed in his experiments on the transmission of drawings. The subjects received the image sometimes as much as a week later. But the remarkable thing is that the displacement often occurred in the opposite direction, indicating precognition of the drawings which would be sent later.

This phenomenon was incontestably established by Soal (1939) in his analysis of the unsensational results of experiments with Mrs

¹ *Modern Experiments in Telepathy*, op. cit., p. 168.

Stewart using Zener cards.¹ The number of successes was considerably increased when guesses on the preceding and following cards were taken into account. Statistical calculation showed that this was not an effect produced by chance coincidence but an authentic phenomenon. From this time forward, Rhine attributed major importance to precognition in extrasensory perception.

114 *Position Effects*

This discovery of displacements in general telepathy led to another discovery, resulting from the statistical analysis of long series of guesses; this was the discovery of 'position effects'.² It was discovered in experiments carried out by Martin and Stribic in America on two very gifted subjects who each gave a total critical ratio equivalent to certainty in 25,000 trials.³ There seemed to be a subconscious tendency to avoid guessing correctly the card following one which had just been guessed correctly. This was shown by the abnormal decrease in displacement effects, which fell well below their statistical expectation.

Soal interprets this as a kind of natural revulsion from making use of an abnormal mode of cognition when evolution is tending towards the dominance of sensory cognition in the animal kingdom.⁴ But this is a doubtful hypothesis, as position effects are not observed with all subjects. They were however plainly marked with Mrs Stewart, who also showed other tendencies in regard to the method of transition between the conscious and unconscious mind.

VI. PHYSICAL THEORIES

115 *Telepathy and Wireless*

Of all psychic phenomena, telepathy apparently lends itself most easily to a physical explanation. Theories of it have abounded for more than a century, based on successive advances in science. Deleuze considered somnambulists as like 'moving magnets' which repeat by induction the cerebral movements of their magnetizer. The force of the will and mental images were supposed to be transmitted by means of a fluid, projected from agent to percipient. This

¹ Ibid., p. 123.

² Pratt and Foster, *Journal of Parapsychology*, Vol. 14, 3 and 6, 1950.

³ *Journal of Parapsychology*, Vol. 2, 1 (1938) and Vol. 4, 12 (1940).

⁴ Ibid., p. 317.

etheral fluid entered the nervous system and acted upon the centres of thought or movement. Static electricity gave rise to new comparisons; Puységur considered the agent's thought analogous to the glass plate in an electrical machine. Then the telephone became a model for telepathy. When fluid theories were considered unscientific, thought was supposed to be, like light and electricity, a system of waves propagated in an imponderable medium, the ether. The discovery of wireless confirmed this hypothesis. *A's* brain must be the transmitting station, the Hertz stimulator, and *P's* brain is the receiving station, Branly's tube or lamp with electrodes.

Binet-Sanglé developed this analogy with physiological details.¹ He associated mental activity exclusively with that of the cells of the cerebral cortex. The sensory neurones were resonators which transmitted to the nervous system the vibrations of the external world. Alongside the image neurones, comparable with the sensitive grains of silver bromide, there were idea neurones, situated in the frontal lobes, and motor neurones which directed muscular movements. Consciousness is nothing but the resistance encountered by the nervous current in traversing these neurones. As in an electric light, the greater the resistance the greater the illumination of the neurone and the more intense the state of consciousness. As they vibrate, the neurones in *A's* brain which have registered an image emit waves and these waves, when they reach the corresponding neurones in *P's* brain, induce in them a similar image: it is a question of telephotography. In the case of auditory images, it is wireless. For reception to be possible, the neurones would have to retract their processes. This special state of cellular isolation would explain hypnosis and disintegrations of personality.

Psychology cannot accept so summary a theory of thought. But whatever one's opinion of the nature of mind, the hypothesis of material communication between two brains in the telepathic act is a legitimate one. Does not normal communication between persons make use of material means? Speech consists of combinations of vibrations imparted to a physical medium, the air, by the vocal cords under the guidance of the brain. The psychological difficulty is not in understanding how the mind could create other and analogous channels of communication, but in knowing *how it acts upon a material medium*, whether this be ordinary matter or energy.

¹ Binet-Sanglé, *La Fin du Secret*, Applications of direct perception of thought, Albin Michel, Paris, 1922.

From this point of view, telepathy is no more incomprehensible than speech or writing.

116 *Fallacious Analogies*

Warcollier made a detailed study of the analogies and differences between telepathy and wireless.¹ He started from the fact, which he thought had been established by observation, that *A* does not communicate his own thought to *P*, but awakens or induces an analogous thought in *P*. Telepathy is a phenomenon of resonance. For there to be resonance there must be synchronization, agreement between *A* and *P*. Indeed there has been often observed between them a certain emotional attachment or psychic affinity. The orientation of *P*'s mind towards *A*, which greatly favours transmission, may be likened to the orientation of the receiving aerial towards the transmitting station. The telepathic waves, on this hypothesis, are propagated in all directions like electromagnetic waves. 'Interception' of messages would be possible. There are the 'cross correspondence' cases. Also relevant are the successful experiments which have been carried out with one agent and several percipients. But if one maintains that these experiments nevertheless show a selective character, it can be replied that this solves the problem of the direction of the waves. Another resemblance between telepathy and wireless is the impossibility of interchanging the transmitting and receiving stations: a percipient is not always a good agent, and *vice versa*. Finally, mental transmission shows disturbances, like all Hertzian transmissions, and it is not unreasonable to ascribe this to the interference of countless trains of mental waves emitted at every instant.

In spite of these obviously superficial analogies, there are differences which must be recognized. For example, the negligible quantity of energy required for mental transmission (this might come from an atomic reaction in the brain), while in wireless about ten watts are required to transmit over the shortest distances. It is true that a chain of neurones may possess a different order of sensitivity from an ordinary detector. We know also that with short waves the energy required for transmission can be considerably reduced without decreasing the range. But with telepathy, the impression seems to be of equal strength, whatever the distance (99).

When the seekers after a physical theory of telepathy find

¹ *La télépathie*, op. cit., p. 288.

wireless an inadequate model, they turn to radioactivity. To explain, for example, the transmission of a word unknown to the percipient, which is difficult on the wave theory, Warcollier suggested a complementary emission of psychic corpuscles. He also suggested, on Langevin's ultrasonic model, an emission by the percipient of waves which reach the agent, mould themselves in some way in accordance with his thought and return in their modified form to their starting point, conveying a new image or idea.¹ Physical theory could go no further. 'We must always bear in mind the new concepts of modern physics,' said Warcollier, 'in order to understand psychological phenomena.' Modern psychologists are not unaware of advances in physics, but do not think this view is justified. A psychological phenomenon cannot be wholly explained in mechanical or physical terms. Bergson's criticism of parallelism is still valid. Not only is the physical inadequate to explain the mental because the part cannot explain the whole, but there is not even that perfect correspondence between the physical and the mental which Leibniz postulated, and which he ascribed to the miracle of 'pre-established harmony'. Parapsychology, indeed, lends itself less than any other human phenomenon to physical explanations.

117 *Cerebral Electromagnetic Waves*

In 1925 Dr Ferdinand Cazzamalli, an Italian psychiatrist and neurologist, published researches which were intended to demonstrate experimentally the emission of cerebral electromagnetic waves in certain metapsychic states.² He continued his experiments for ten years, during which time he perfected his recording apparatus to silence the technical criticisms that had been made. The subject is placed in an electrically insulated room which forms a Faraday cage. He is seated in an armchair and the experimenter sits beside him, supervising the apparatus. This consists essentially of an autodyne oscillator for ultra-short waves which produces waves one metre in length. They interfere with those which are supposed to emanate from the subject, and which are caught by a small aerial above his head. The resulting waves are recorded on a continuously unrolling graph. Cazzamalli is certain that all experimental errors have been eliminated.

¹ *Revue métapsychique*, 1924, V.

² Papers at the International Paris Conference, 1927, and at the International Oslo Conference, 1935. (*Revue métapsychique*, No. 6, 1935).

States of vivid dreaming or visual hallucination are produced in the subject, and the relationship of these to the electromagnetic phenomena is observed. The graph, which is a regular sine-curve, shows at these times weak waves of great width. The experiments have given interesting results with several dowsers in light trance, as well as with clairvoyant subjects. The experimenter believes that the recordings correspond to the psycho-sensory activity of the brain.

Criticisms have been made of the technique used as well as of the interpretation of the results. Cazzamalli never stated the frequency of the waves he claimed to have recorded, and did not try to relate the phenomena to those discovered by Berger and Adrian. Azam very justly remarked¹ that, considering the physiology of the nervous system and the cerebral hemispheres, it is unlikely that waves of such high frequency would be emitted by the sensory nerves. He attributed the phenomena to conditions of static hypertension, perceptible by means of a hypersensitive electrical indicator. But these effects would not, according to him, be caused by paranormal manifestations, but would arise from any kind of cerebral activity, like Berger's waves. It would be rash to see in them 'psychic radiations' or even a form of physical energy associated with thought.

118 Richet's 'Sixth Sense'

In 1928 Charles Richet published a summary of his *Traité de métapsychique* under the title, *Notre sixième sens*.² He describes it as a work of 'audacious physiology', which is difficult to understand since the mental phenomena of psychical research are psychological. In any case, these phenomena cannot be explained by a 'sixth sense' with no known organs or mode of operation. That physiology has added new senses to the five traditional ones is irrelevant. It is obvious at a glance that no psychical phenomenon can be compared to a sensation. Paranormal information, whether purely telepathic or clairvoyant, has no specific character of its own. It is *knowledge* formed from the same sensory materials as normal knowledge. It does not include new elements which would be the sign of a different sense.

¹ *Revue Métapsychique*, 1936, No. 2.

² Editions Montaigne, Paris (undated). Cf. R. Sudre, 'Have We a Sixth Sense?' *Psychic Research*, New York, 3, 1928, and *Les Nouvelles Enigmes de l'Univers*, op. cit., p. 300.

If there is no new sense, there may be new ways of acting on the ordinary ones. Richet writes: 'We are surrounded by vibrations of which some affect normal sensibility and others do not'. Among the latter there must be some which provide an explanation of telepathy and clairvoyance. This is what lies at the back of the great physiologist's mind. He suggests a vibratory, and hence physical, interpretation of these phenomena. But what vibration can convey the complete picture of an event outside the reach of the ordinary senses? The suggestion seems not only impossible but absurd.

We have already shown the inapplicability of any physical theory to telepathy. Even more so with clairvoyance. Phrases like 'the vibrations of things' and 'sixth sense' are literary conveniences which have no correspondence with reality.

119 *The Interaction of Mind and Body*

In studying the physical phenomena of telepathy, it is possible to lose sight of the fact that the problem cannot be entirely solved without also solving that of the interaction of mind and body. Instead of trying to find what kind of vibration can transmit the image of an external object to the mind, without using the retina, it would be better to keep to the only accessible problem: in the same way that there is in vocal transmission a conveyance of energy between two organs, the larynx of *A* and the ear of *P*, is there in mental transmission a similar conveyance of energy between the two organisms, *A* and *P*? That is to say, does psychological communication still use physical channels? Is there a medium, ether, super-ether or meta-ether, which permits the propagation of waves, or is it a question of a corpuscular emission producing exactly the same results?

Here experience seems to lead us in two opposite directions. On the one side it seems to justify the hypothesis of animal magnetism, of the existence of a cerebral or nervous physical radiation able to influence living organisms. On the other, it shows the intimate connection of telepathy and clairvoyance, which leads us away from the physical into pure and transcendent psychology. It is not impossible that further experience will resolve this conflict. If it revealed definite laws in thought-transmission, we should be justified in concluding that a physical process was concerned in the phenomenon. But so far this is not the case.

From the point of view of the psychological theory, we should

perhaps criticize the basic model which has served us so far: the emission of something from the agent to the percipient. This model seems to describe passive telepathy, but is not passive telepathy a fiction created to meet the needs of a physical explanation? Warcollier himself showed that when the percipient does not attempt to receive, transmission does not in general occur. He has to place himself in the correct conditions, half-sleep, mental vacuum, silence, etc. — which means that he enters the first stages of hypnosis. In deep hypnosis perfect transmission has been observed. Clairvoyants are the best percipients. The more we increase the hypnotic conditions, the more the percipient takes the active role, and the more 'thought-reading' replaces 'thought-transmission'. 'It may be,' said Mrs Sidgwick, 'that the role of the so-called agent is purely passive, and that it is the percipient who plays the active role in extracting an idea or a combination of ideas from the mind of the agent.'¹ We can then return boldly to the problem and say: In all cases there is only one agent, and that is the percipient. Even when the agent sends deliberately, he is only making his subconscious accessible to the percipient. *This theory, which cannot be discredited on grounds of experience, makes telepathy a special case of metagnomy and frees us from risky attempts to set up physical, or even physiological, models.*

¹ 'A contribution to the study of the psychology of Mrs Piper's trance phenomena', *Proc. S.P.R.*, Vol. 28, Part 71, 1915.

CHAPTER V

METAGNOMY

I. FORMS OF METAGNOMY

120 *Definitions*

Metagnomy (from *meta*, beyond, and *gnome*, knowledge) is knowledge either of physical objects or of thoughts normally inaccessible to the mind.

The early magnetizers called this faculty *lucidity* or *clairvoyance*, because somnambulists could see clearly their own internal organs or those of patients who were brought to them, describe events at a distance, and describe events in the past and future. Myers justly criticized the word *clairvoyance* because, he said, 'The faculty rarely functions in a way analogous with an extension of seeing.' He proposed the term *telaesthesia* for this particular meaning and, in a more general sense, *telepathy*, which unfortunately implies a hypothesis. It was Boirac who proposed the better constructed term *metagnomy*. Richet preferred *cryptaesthesia* (*kryptos*, concealed, and *aisthesis*, feeling). These two words, especially the former, do not suggest any hypothesis. We have therefore used *metagnomy* which, applied to prevision, indicates better a transcendent faculty. This is in agreement with Osty and some modern psychical researchers. Wasielewski used the word *panaesthesia* which has hardly ever been used by anyone else. As for Rhine's *extrasensory perception*, we have already explained our criticisms. To them we would add that scientific usage requires short words derived from Greek roots.

Telepathy may be only a special case of metagnomy. We have studied it separately because it takes the form of extrasensory communication between two minds. Logically it must be admitted that this form of cognition is different from direct awareness of an object. However, experimental evidence makes us incline towards regarding these processes as a unity. For this reason we shall

consider telepathy in its metagnomic form of 'thought-reading', in which the active role passes from the agent to the percipient.

121 *Classification*

After that we shall study the extremely varied forms of metagnomy or clairvoyance. They are found in somnambulism, hypnosis, trance, dreams and in the various hypnoid modifications of the waking state. As these types arise from subconscious activity, they cannot be used as the basis for a classification. It is better to use formal characteristics: *tactile metagnomy*, or gaining information by touching objects; *cryptoscopic metagnomy*, or seeing through opaque bodies; *mantic metagnomy*, or hallucinatory vision in a crystal, coffee grounds or cards; *autoscopie metagnomy*, or seeing the internal organs of one's own body; *telaesthetic metagnomy*, or seeing distant events; *rhabdic metagnomy*, or finding springs of water, ore, underground caves, etc. To these we must add *mellontic metagnomy*, or divining the future, the most mysterious form of clairvoyance.

Obviously these are empirical divisions, for they do not correspond to distinct sub-faculties. We must accept the profound underlying unity of clairvoyance and all other psychic phenomena; the variations with individual subjects are the result of habit and autosuggestion. But from an academic point of view it is convenient to study these forms separately, as they all have peculiarities of their own and classification allows the experimental facts to be easily arranged in an orderly way.

As for a logical classification, it is difficult to make, and assumes hypotheses.¹ Two main divisions can be made:

Intuitive Metagnomy, or paranormal knowledge of mental events.

This is almost identical with Myers's *telepathy*;

Perceptive Metagnomy, or paranormal knowledge of physical facts. This corresponds to *telaesthesia*.

The hypothesis implied in this division is that there is really a sensory exteriorization. To establish this it would be necessary to prove that the knowledge acquired was not drawn from any mind which might have acquired it normally, and this is demonstrably impossible. Other objections may also be raised when the knowledge seems to be drawn from dead persons.

¹ We cannot accept classifications like Tischner's which divide metagnomy into three classes: *cryptoscopy*, *clairvoyance in space*, and *clairvoyance in time*. Such a division is arbitrary.

Let us, therefore, limit ourselves to empirical classification and a convenient arrangement of the facts. As in the case of 'telepathic hallucinations', the only point which we shall have to leave until we study physical phenomena is the question whether clairvoyant perception of distant events is sensory or extrasensory. This is a secondary problem, but not without importance.

II. TELEPATHIC METAGNOMY

122 *Metagnomic Rapport*

Active telepathy, in which the percipient is not informed, but informs himself by exploring the agent's mental stock of ideas, is the first stage of metagnomy. We have seen that certain subjects in the hypnotic state can read the thoughts of their hypnotizers with perfect accuracy. When an unknown person is brought to a good clairvoyant, he is often able to tell him his name, his intentions, the events of his life and even those of them which the consultant has forgotten, for it is not a question of reading the conscious mind, but the subconscious. It even happens that things in the forefront of consciousness are missed, and the wish for an idea on which one is concentrating to be perceived, produces no results. We know that distance is not relevant to telepathy and that the percipient can communicate quite easily with the agent on condition, at least in experiments, that he should be mentally 'orientated' towards him.

In spontaneous telepathy, it may be held that the necessary orientation is already in existence, even if the percipient is not aware of it. As it is a question of 'monitions' which relate to such events as death and accident, occurring between persons who are related or known to each other, it is possible to imagine a certain anxiety or latent idea which induces the orientation without the person concerned suspecting it. The emotion or feeling experienced by the agent may serve only to trigger off the percipient's vision. To make a rough analogy, the percipient would be like someone waiting near a telescope focused on a distant point until some signal, a fire for example, made him look through it. This would explain the subjective character of his vision: *P* does not share the states of mind of *A* who is drowning, he does not experience the cold of the water or the agony of death, but he sees more or less symbolically a scene which may only be his own reconstruction of the actual one. Thus there is no telepathy in the sense in which we defined it. On

this theory, *A transmits nothing; he only attracts the attention of P, to realize for an instant the conditions for communication.*

This is an important theory. We know the part played by metag-nomic *rapport* in hypnotic experiments, in which there is a perfect and exclusive communication between the subject and the hypnotizer or persons chosen by the hypnotizer. The *rapport* is also established when a consultant comes into a clairvoyant's presence. It is also present when the latter touches something which belonged to the consultant, and we shall discuss the part played by the object in tactile metagnomy. The *rapport* is established when an intermediary talks to the subject about an absent person, more or less well known to him. It even occurs when this intermediary merely shows the subject a photograph of the person concerned.

123 *Psychic Nature of the Rapport*

Arguing from the experiments of the magnetizers, Ochorowicz stressed the importance of the *rapport*, and he was led to believe that this relationship was the result of a 'fluid'.¹ This is why he was at first unwilling to believe in telepathy at a distance. We can see today that this *rapport* could not possibly be material or electromagnetic. It must be considered entirely psychic. 'The subject's mind,' said Osty,² 'seems to be able to communicate with all the individual elements of humanity, if he is only given a starting-point.' The minimum starting-point is a thought. The clairvoyant has only to think of someone to establish the connection. Once established, the connection is indestructible. A subject 'finds again' more easily a person with whom he has once been connected. In spontaneous telepathy there is no difficulty in showing the existence of a previous *rapport* between agent and percipient. *A's* subconscious mind is always connected with *B's*, but this does not result in perceptible communication until the day when a dramatic event brings the relationship into play.

It is very far from being the case that the clairvoyant faculty can operate, or the *rapport* be set up, with equal ease with all persons. In the first place, the process varies with the physical and mental characteristics of the subject. It is known to be very sensitive to influences, often imperceptible, by which the faculty can be stimulated or paralysed. It follows that some persons will appear impenetrable or only slightly penetrable, while a clairvoyant will

¹ *De la suggestion mentale*, op. cit. ² *La connaissance supranormale*, op. cit., p. 203.

produce every detail of the life and character of others. Presenting the same person to various subjects, Osty observed that the degree of penetration differed, but that a person was rarely impenetrable to all the subjects. The law of collective psychism, of which we have already shown the universality, thus applies to the particular case of metagnomy.

124 *Rapport with Several Agents*

A very interesting contribution to the problem of *rapport* is Soal's series of experiments with Mrs Stewart using two agents.¹ One of the agents picked up the cards as usual, but they were blank ones; the other, in another room, was looking at the real cards (initials of animals' names). The subject had to try to enter into *rapport* with both agents. There were 3200 trials which gave 759 correct guesses, giving a critical ratio of more than seven, corresponding to a probability of one in two million. Soal suggested that the minds of the two agents combine, which is an example of collective psychism.

Other experiments in 'opposition and conjunction' gave added insight into the problem of *rapport*.² They were devised so that the choice of letters was governed by chance only, but so that this choice was different for agents in opposition and the same for agents in conjunction. The experimenter expected that this technique would produce a decrease or increase in the number of correct guesses, according to which arrangement was used. The experiments showed that the agent in opposition had no effect. Even in the experiments in conjunction, the subject remained in *rapport* with only one of the agents, the one she more or less consciously selected. 'The principal result of these experiments,' wrote Soal,³ 'is to bring us back to something like the old idea of "rapport" between agent and percipient in telepathic experiments. But . . . all we mean by this is that subconsciously Mrs Stewart concentrates her attention exclusively on one of the two agents and momentarily ignores the other.'

125 *Indirect Rapport*

In one of the experiments of Wasielewski and Tischner⁴ the subject saw in the transmitted image a detail that the experimenter had not

¹ *Modern Experiments in Telepathy*, op. cit., p. 219.

² *Ibid.*, p. 228.

³ *Ibid.*, p. 244.

⁴ R. Tischner, *Ueber Telepathie und Hellsehen*, op. cit., 1921.

noticed, but which was in the original object and so had been registered by his subconscious memory. There are innumerable other cases in which the subject, confronted with a consultant, has told him things he had completely forgotten but which were nevertheless in his subconscious memory. But the characteristic sign of clairvoyance is to tell the consultant facts which have never been part of his experience. For example, he may be told of some action by his wife or a friend of which he has no knowledge. In such a case it is logical to suppose that the subject can be placed by the consultant in mental *rapport* with all the persons who have played some part in his life.

This indirect *rapport* produces more information when the person concerned has played an important part in the consultant's life, but according to Osty, it does not give the same wealth of detail as direct *rapport*. The information 'remains in the region of general ideas, principal characteristics giving a rough idea of an event, place, illness, character or intellectual life'. If an attempt is made to force the subject, mistakes are made. Each consultant thus provides the subject with a centre from which his exploring thought can radiate in various directions to gather information. This mysterious research may yet show that in the case of a sufficiently stimulating personality, the quality and quantity of the information obtained will be superior to that obtained from others.

Extended in this way, the telepathic hypothesis can explain much, since the clairvoyant can potentially draw upon the memories of all living human beings. But most metagnomic observations show plainly its inadequacy. It is insufficient when the only witness of the events reported is dead, when the events are not known to any person, and when the events are not yet completed. In these three cases the metagnomic faculty works as well as in others, and it works in the same way, with the same apparent causes of error and success. This has led to hypotheses such as survival, astral doubles, fourth dimension, etc., which we shall examine when we come to them. But let us state at once that these hypotheses can only be regarded as complementary. They cannot claim to replace a theory which closely describes the facts and is capable of further improvement.

126 *Metagnomy and Prosopopesis*

We know that metagnomy works particularly well in trance and hypnosis. But these states in which consciousness is absent or

restricted are particularly favourable to prosopopesis, i.e. the autonomous or suggested creation of personalities. It is thus easy to foresee that, combining the two, the subject will ascribe to the spirits he impersonates the paranormal information he receives. But no relationship can be maintained between this information and the existence of spirits. Metagnomy and prosopopesis are independent functions which are found separately in psychic subjects, and the synthesis of which constitutes the commonest kind of spiritist phenomena. Even with mediums, long accustomed to impersonating the dead, the two functions can be seen to be independent. The metagnomic function shows exactly the same characteristics as with non-spiritist subjects. It does not vary, whether it is ascribed to manifestly fictitious personalities like Mrs Piper's Phinuit, or to realistic personalities. Finally, which is important, it remains constant whatever the personality; or rather, the variations shown do not depend on the personality in question, but on the greater or less facility of the medium in reconstituting the unknown elements of the personality; that is to say, on purely metagnomic factors.

Lodge remarked, for example,¹ that Mrs Piper's personifications were bad when she was far from the surroundings in which the person had lived. The Gurney personality she produced in the United States was so inadequate that William James called it the 'pseudo-Gurney'. It improved when the medium went to England. And conversely, Hodgson, admirably lifelike in Boston, became in Liverpool and London a mere unprincipled person, unable to recognize his old friends. It was the same with Myers, who lost his brilliance and became dull when he left his native land and crossed the Atlantic. In short, metagnomy and prosopopesis probably possess the same psycho-physiological conditions, but they are independent of each other and are merely superposed in spiritist phenomena.

127 *Mrs Piper's Clairvoyance*

Mrs Piper's spiritist background inclined her primarily to the reconstruction of personalities. She practised this art with some weaknesses, but has never been surpassed. Her metagnomy was intuitive and only slightly perceptive. She was almost completely

¹ O. Lodge, 'Report on some trance communications received chiefly through Mrs Piper', *Proc. S.P.R.*, Vol. 23, Part 58, 1909.

unsuccessful at reading folded papers, as Lodge found by repeated experiments. But when a person was brought to her, or she was given an object belonging to a person to hold, she described with marvellous accuracy their lives and characters. In the early stages of her career, in the days of Phinuit, unknown persons were brought to her, to whom she talked about their past, their relations, and their most intimate emotions. An enquiry, conducted by Hodgson with the assistance of private detectives, could find nothing to support a suspicion of secret ways of obtaining information, and he had to admit the reality of clairvoyance. Her séances with Lodge in 1889-1890 were extremely interesting. 'She sometimes said things, either to me, or to others, so far removed from our conscious thoughts that they seemed at first inaccurate or were not recognized; their sense was realized only gradually or with the help of subsequent explanation.'

Lodge one day gave Mrs Piper a watch which had belonged to one of his uncles who had died twenty years earlier, and whom he had never seen. She immediately gave his name, as well as that of one of his brothers of whom he had been very fond. She gave all the relevant details of his childhood, described episodes like swimming across a river, killing a cat, and the possession of a snakeskin, which the surviving uncle did not remember or only with difficulty, and of which he had to seek confirmation from another brother. Lodge says that even the theory of telepathic activity by discarnate intelligences would still be inadequate to explain the clairvoyant information given by Mrs Piper. The powers of this medium became even more astonishing after Hodgson's death, who she then claimed to be her control. William James wrote his famous paper on her¹ in which he staked his reputation for wisdom or folly on the assertion that the Boston clairvoyant 'knew, in the trance state, things which she could not possibly have learnt in the waking state'.

128 *Peculiarities of Metagnomy*

We have already observed that Mrs Piper was only hypnotizable with difficulty; that is to say she resisted the establishment of *rapport* with a hypnotizer and thus showed herself refractory to thought-transmission. Lodge carried out with her unsuccessful trials of the *willing game* and of card-guessing. In trance she showed

¹ 'Report on Mrs Piper's Hodgson Control', *Proc. S.P.R.*, Vol. 23, Part 58.

little awareness of thoughts in the conscious minds of sitters or ideas which they wished to transmit to her. For example, when personifying the wife of Hyslop in his presence, she did not call him by the name he gave her, which was in his mind, but by the name his relations and friends used. We could explain this resistance by the coherence of the personality without accepting genuine possession; but it is simpler to see in it a general characteristic of metagnomy. The study of telepathy has shown us that one does not always transmit what one intends to, and one transmits less according as the percipient plays a more active part. In any case, the study of clairvoyants who show no prosopopesis often reveals the same resistance to mental suggestion.

In the second place the metagnomic function is equally irregular and capricious with both types of subjects. William James, in his report on Mrs Piper, emphasized 'so many repetitions, hesitations, irrelevancies, nonsensical statements, fumbblings and obvious fishing; false tracks plausibly explained, claims to nonexistent powers, and obedience to suggestion . . .'. It is the same thing with non-spiritist subjects, but the effect is less noticeable, because they are not under the necessity of maintaining a role; when the information comes to an end, they say: 'I cannot see any more', instead of saying: 'Goodbye, I must go'. When they find themselves on a false track, which occurs frequently, they admit it instead of attempting to justify themselves with elaborate arguments; but the phenomena are exactly the same.

In the use of evocatory objects, spiritist and non-spiritist subjects make exactly the same mistakes. Thus, when two locks of hair were given in turn to Mrs Piper, she made a curious mixture of the two personalities, attributing to one what belonged to the other, because the two locks had been in contact for a moment in an envelope.¹

129 *The Clairvoyance of Pascal Forthuny*

In contrast to Mrs Piper's faculty which took a spiritist form, we shall study the case of another great clairvoyant, a Frenchman named Pascal Forthuny, who has never claimed to summon spirits. We must say that he is a cultured writer and accomplished artist who shows no signs of neurosis. Nevertheless, his subconscious is

¹ R. Hodgson, 'A record of observations of certain phenomena of trance', *Proc. S.P.R.* Vol. 8, Part 21, 1892.

remarkably receptive. A close and long-standing friendship with him has given me the opportunity to follow the birth and development of his clairvoyance, and to verify its genuineness.¹

Although he gives excellent private sittings, his faculty is stimulated by an audience and his best clairvoyance has been produced at the meetings of the Metapsychic Institute, at which were present many people who were strangers to him. The audience was constantly changing as time went on. When his audience was seated, he walked among the chairs and stopped before people who stimulated him, to tell them what spontaneously occurred to him of their past, present, and often future as well. It was names that came to him first, and if these were right it fired the train of genuine 'thought-reading', which depended on telepathy as much as on clairvoyance. He found it very easy to make contact in this way with certain persons, with others extremely difficult. The facts which were revealed in disjointed fragments sometimes became indiscreet, and the subject attempted to escape from the embarrassing situation by ceasing to answer the clairvoyant, or by denying that they were true. But in any case Forthuny made his disclosures allusively and knew when it was time to stop, thus giving an unusual example of the critical faculty controlling subliminal intuitions. Censorship does not take place with him on the edge of the unconscious mind, but at the height of consciousness.

The lively imagination of the subject and the persistence of his waking consciousness with slight trance symptoms, lead him sometimes into error and he wanders off on false tracks. He asks to be stopped when he goes wrong, but never indulges in the repeated fishing used by so many mediocre mediums. On the contrary, he refuses the hints that inexperienced consultants would be only too eager to give him.

It would be impossible to give an adequate account of some of his hundreds of astonishing successes, in which he explores the events and secret thoughts of the life of an unknown person. We shall only discuss the peculiarities of his methods.

130 *Spatial Localization and Association of Ideas*

Forthuny cannot say how he receives this external knowledge. In his best experiments his intuition is instantaneous, and its strength

¹ Cf. Dr Osty's book: *Une faculté de connaissance supranormale, Pascal Forthuny*, Alcan, Paris, 1926.

increases with its precision. Thus he said, for example, to a stranger who was in his audience for the first time: 'Sir, you are a journalist. . . . Your name is L. . . (the name given was nearly correct). . . . I see you in Belgium at Antwerp. . . . I see also M. Henry de Jouvenel of the *Matin*. . . . You are the chief editor of the *Matin* at Antwerp'. He usually receives names by an 'internal voice'; at other times he sees written words and the subliminal information takes the form of a succession of coloured pictures.

When Forthuny gives a public sitting it sometimes happens that the person to whom he feels drawn and to whom he describes names and ideas, says that this is not relevant to him. But his neighbour says that it does apply to him. Sometimes the clairvoyance begins well with the selected person and suddenly runs off the rails. But then the information is found to apply to another person present. The subject does not always notice this confusion and these mistakes in attributing the facts to the correct person raise the question of associations in thought and in space.

Another curious peculiarity is the recourse to associations of ideas and to allegories or symbols when the idea does not clearly express itself. In guessing proper names, it is usually the first letter or first syllable which is known with certainty; the remainder is given with hesitation. With more complex ideas in which emotion and intellect combine, the mechanism of association of ideas works the more easily that the subject is a writer of considerable ability. He often makes use of puns. For example: a lady named Pardon whose pardon he persistently begged; a man named Armas whom he saw 'leading armies'; another who gave him irresistibly the idea of a *thing* and who was named *Rem* (accusative case of the Latin *res*, a thing); a woman whom he saw surrounded by sheep and whose name was *Shepherd*; another who was seen winning (in French, *gagnant*) much money, and whose muff when the subject touched it seemed to him to be 'a block of diamond', while in fact her name was Mme *Gagnerot*, wife of a diamond broker; a young man whom Pascal Forthuny saw carrying out minutely detailed research work and who was connected with a 'cardinal of the curia': in this case it turned out that the young man was one of Mme Curie's assistants. The interesting thing about this kind of perception is that the subject does not know when he speaks whether what he says is symbolic or real.

III. TACTILE METAGNOMY

131 *Stimulating Objects*

The obviously subconscious forms of metagnomy (hypnosis, trance, dreams) show that the *rapport* can very well be established by thought alone, without any material stimulation. We have seen that this is also the case with semi-conscious metagnomy, when the consultant limits himself to indicating to the subject the person about whom information is desired. 'Talk to me about the person of whom I am thinking!' Osty once said to one of his subjects; and the experiment succeeded admirably. But it has been noticed that the experiment often produces better results when there has been contact between the subject and the person, or one of his letters or an object he has touched.¹ Subjects explain this by saying that their faculty is assisted by the presence of a 'fluid' given out by the individual, which impregnates objects. This fluid carries psychic properties: it is 'condensed thought'. The longer the object has been in the person's possession, the greater its evocative power. When the subject touches such an object, he experiences a sensation of 'fluid invasion', which ranges in intensity from the vaguest of impressions up to an emotional crisis (when the object summons the idea of a crime, for example). According to his simultaneous intuitive judgement, he speaks of a good or bad fluid, or of a neutral fluid, and the information he gives varies accordingly.

We shall discuss later the question of 'psychic fluid'. It is a complex one because the experimental evidence seems contradictory. It seems to have been shown that pure suggestion can give the same results as the magnetizers' fluid. On the other hand, the phenomena of materialization are indisputable. One might provisionally assume that an object touched by a person is 'marked' in the same way that a medical substance is marked by a radioactive isotope. It is this 'mark' that gives the clairvoyant his starting-point in reaching the distant person.

¹ Without deprecating the usefulness of serious graphology in analysing the general tendencies of a character, we observe that the graphologist is often assisted in his analyses by his intuitive, or metagnomic, faculty. A remarkable subject of this kind was Raphaël Schermann, of Vienna, who fully convinced Professor Oskar Fischer. Given a scrap of handwriting he became aware of all the physical and mental characteristics of the person concerned. Cf. Fischer, *Experimente mit Raphaël Schermann*, Urban and Schwarzenberg, Vienna and Berlin, 1924.

132 *Buchanan's 'Psychometry'*

The magnetizers limited themselves to producing a physiological sympathy; their somnambulists had not applied their gifts to other fields than diagnosing illness. An American doctor, Dr Buchanan, found that subjects could also identify medicinal substances in sealed envelopes; then he gave them letters from unknown persons. Holding these letters to their forehead, the subjects were able to describe the character and life of the writers, sometimes 'better than their most intimate friends'. Buchanan gave this faculty the name of *psychometry*, which means measurement of the mind.¹ He found that not only mental states but also physical events could be perceived by the subject. 'The past,' he said, 'is buried in the present. . . . The revelations of psychometry allow us to explore a man's history, as the discoveries of geology allow us to explore the history of the world; and I believe that now the psychologist and geologist will go hand in hand.'

Dr Denton, who was indeed a geologist, and whose wife was a 'psychometrist', tried to carry out this exciting plan. He gave Mrs Denton and other subjects fragments of old rocks, animal fossils, meteorites, etc., and obtained some curious descriptions, sometimes very detailed and scientifically probable. He made the same experiments with historical objects and had the house of Cicero described to him, as well as the destruction of Pompeii and the tomb of the Kings at Thebes in Egypt. Later he tried to reconstruct the geological history of the earth, with explanatory drawings, and even to obtain information about the planets. The revelations made confirmed his theory, but were not open to confirmation in their turn; and he did not realize that a geologist can never question a subject on geology without running the risk of mentally suggesting the answers.

133 *Psychical Impregnation of Matter*

Denton was led to improve Buchanan's theories. 'The past,' he said,

¹ *Journal of Man*, 1849.

All modern psychical researchers agree in finding this word ridiculous, and it has besides another meaning in experimental psychology; however it continues to be used. Richet suggested instead *pragmatic cryptaesthesia*, from *pragma*, thing in general. Unfortunately 'pragmatic' has clearly defined meanings in legislation and philosophy. A word could easily be made from *haptê*, which means contact. Pending the decision of an international Conference, we recommend *tactile metagnomy*, which is clear and simple.

'is not buried in the present. . . . The past lives in the present and can be read as precisely as if the observer had been present at the time when it came into being. . . .'¹ His theory was physico-psychic. Objects emitted radiations of energy which imprinted their images around them. 'You cannot then enter a room, day or night, without leaving your portrait behind you. You cannot raise your hand or wink your eye, the wind cannot stir a hair of your head without every movement being recorded for all future ages. The window-pane, the brick in the wall, the paving-stone in the street receive the images of all passers-by and keep them with care.'² Emotions and ideas could also be imprinted on matter. 'You cannot sit down in a chair without imparting to it an influence which will transmit to a sensitive the idea of your presence and of your mental characteristics. . . .'³ Finally, 'a personal relic of Shakespeare can tell us more about him in half an hour than his biographers have discovered in two hundred years. A pebble from the streets of Jerusalem is a library containing the history of the Jewish nation. . . .'⁴

Psychical research is not yet in a position to estimate the grain of truth there may be in these theories, but Buchanan's experiments cannot be rejected without examination. Analogous experiments have continued to be made, and Mrs Denton's analysis of her faculty is still irreproachable. She did not fall into an 'abnormal state', but placed herself in the conditions of mental and physical relaxation which favour subconscious communications. Her eyes were blindfolded and the object placed in her hands. Then she saw visions, not fragmentary, but complete pictures with all the movement and colour of life (hypnagogic images). The subject does not see them unrolling in front of him, but he is himself part of the picture; he is actor and not spectator. His field of vision moves as in reality. He has also auditory impressions: the hallucination is complete. Mrs Denton pointed out the fact, abundantly confirmed since, that the object does not evoke the person who first possessed it, but all who have touched it.

134 *Experiments of Kotik and Wasielewski*

It is strange that tactile metagnomy, with its double interest from the point of view of clairvoyance and of 'fluid' theory, should have

¹ W. and E. M. F. Denton, *The Soul of Things*, or psychometric researches and discoveries, 3 vol., Wellesley, 1863; 8th edition, 1888, II, p. 25.

² *Ibid.*, I, p. 32.

³ *Ibid.*, I, p. 56.

⁴ *Ibid.*, III, p. 348.

been so neglected by experimenters. The English and American S.P.R. have confined themselves to the study of telepathy and 'spiritualism' and have made no special study of this subject. So we must find, among the cases of clairvoyance, those which have a tactile character. Kotik's experiments¹ can be included in this chapter because of his hypothesis of a 'psycho-physical' energy able to attach itself to inanimate objects and to give an impression to sensitives. Feeling two letters sent by Kotik's brother, one of his subjects perceived, not the sentences contained in it, but the preoccupations in the writer's mind. Kotik concluded that his thoughts had impregnated the paper.

The subject also received visual memories which people had imprinted on blank sheets of paper by looking at them. This experiment is analogous to those which Charcot carried out at the Salpêtrière with his hysterics. When they were hypnotized, he suggested to them the presence of a portrait on a white card. The subjects not only described it correctly, but when awakened they selected the card without hesitation from a dozen others. Binet explained the phenomenon by association of the image with a real point of reference, a grain in the cardboard, for example.² Kotik's experiments do not invalidate this theory, whether it be true or false, for they are inexplicable by pure metagnomy.

Wasielewski also made some tactile experiments with Fraulein v. B. A Roman coin with the image of Valentinian on it stimulated visions of Roman houses and crowds, a gilded dome, a battle, etc..., and finally of a symbolical crucifix, which is interesting as this Emperor had a deep faith in Christianity. Wasielewski rejects the 'material and mystical' idea of a 'fluid-impregnated' object.

135 *Experiments of Pagenstecher*

The accidental discovery in 1919, in Mexico, of an excellent subject called Señora Reyes de Z. enabled Dr Pagenstecher to continue experiments of the same type as Denton's. He had been very impressed by *The Soul of Things*. His subject easily yielded to his expectations, which is yet another proof of the power of suggestion and the plasticity of the psychic faculty. The experiments were supervised by a scientific committee, and later by W. F. Prince, of the American S.P.R. The latter published the reports of the experi-

¹ *Die Emanation der psychophysischen Energie*, Bergmann, Munich, 1908.

² Binet and Féré, *op. cit.*, p. 166.

ments.¹ The subject was hypnotized and eventually entered a cataleptic state. The objects were then placed in her insensible hands. Like Mrs Denton, Señora Z. did not see a kind of cinema film, but took part in the action. 'All my senses are alert,' she said. 'I hear, I see, I taste, I feel. I experience cold and heat, I suffocate; in short I live the scenes as if I was actually present.' She estimated distances with great precision. Before the psychometric experiments, she was in close *rapport* with her hypnotizer, then in the cataleptic stage all her senses were concentrated on the object, thus completely realizing Rochas's exteriorization of sensibility.² If the object was pricked or burned, she felt the prick or the burning.

The experiments were divided into four classes according as the visions were verified by living witnesses and illustrated documents, by accumulated details, or were merely very probable in the absence of any possible verification. An artificial leaf from a Catholic chapel, a strap taken from a dead soldier, historical relics, etc. produced striking reconstructions. A fragment of Roman marble gave rise to a precise description, accompanied by drawings, of the Forum and its temples. A note, written by a man on the verge of apoplexy, stimulated a complete description of the scene, while a similar but blank piece of paper produced the picture of the factory from which it came.

136 *Exclusion of Suggestion*

Pagenstecher rejected the hypothesis of mental suggestion. He quoted a large number of cases in which he was not thinking of what the subject disclosed. But the best proof was provided by the experiment of the scientific committee in which four fragments of the same block of pumice stone, treated in different ways, were selected at random and presented to the subject. For all of them she described the same underwater scene with fish swimming, adding for each piece appropriate impressions. Fragment 1, soaked in tincture of gentian and asafoetida, produced taste sensations; sample 2, which had been shut up for three weeks beside a clock, rhythmic noises; sample 3, rolled in saccharine and sugar, sweetness; finally,

¹ Pagenstecher, 'Past Events Seership' (a Study in Psychometry), edited by W. F. Prince, Vol. 16, Part 1, *Proc. A.S.P.R.*, 1923. Enlarged German edition, 1924: *Ausser sinnliche Wahrnehmung*, Mathold, Halle, 1923.

² A. de Rochas, *L'exteriorisation de la sensibilité*, op. cit., 1894.

sample 4, heated by burning sulphur, an impression of heat and the smell of sulphur dioxide. This demonstration seemed conclusive.

Another curious experiment related to the vision of an object and an act which remained in the projected state. The clairvoyant drew precisely, as if she saw it round a lady's neck, the rough model of a complicated jewel which was to be made for her, but which was in fact never ordered.

The confirmatory experiments of Prince were also interesting. He brought fourteen objects which had no great emotional associations, but which usually produced relevant impressions. One of these experiments was instructive. In two boxes were enclosed two pieces of silk ribbon, the boxes and ribbon being exactly similar, but one of the pieces coming from the altar of a church and the other directly from the manufacturer's. Prince mixed the boxes together, and placed them successively in contact with the subject's rigid fingertips. Her two impressions corresponded exactly to the origins of the material: a Mexican church with dancing Indians, in one case, and a French ribbon-factory in the other. In another case which equally avoided the possibility of telepathy, the object was a garment belonging to a rich farmer who had been murdered. Three attempts produced only visions of a cloth factory. But when the cataleptic finger of the subject was placed on a piece of the cloth which was stained with blood, she saw a vision of the murder with details which did not correspond to the vague notions in Pagenstecher's mind, but which were confirmed.

Hettinger resumed later this kind of experiment in tactile clairvoyance¹ and obtained equally positive results.

137 *Osty's Experiments*

Osty's experiments, which he carried out with a number of subjects over a period of twelve years, and the information he derived from them, made a valuable contribution to the study of metagnomy.² His numerous cases, some of them with bulky dossiers, show that the emotional nuances of the human personality can be perceived by a clairvoyant as well as past or future physical events, even when the personality is dead, and telepathy between the living can play no

¹ Hettinger, *The Ultra-Perceptive Faculty*, Rider, London, 1938; and *Exploring the Ultra-Perceptive Faculty*, Rider, London, 1941.

² F. Osty, *Lucidité et intuition*, Alcan, Paris, 1913; and *La Connaissance Supranormale*, op. cit.

part. For example, in a case which came under legal scrutiny, it was possible to find in a forest of the Cher the body of an old man who had disappeared and was being sought in vain. The subject in Paris, when given a silk handkerchief belonging to the lost man, described how he had spent his time until he fell in the wood, to rise no more. All these details, as well as the physical and mental description of the man, were found to be accurate. The interesting thing is that the handkerchief had been taken from a wardrobe and not from the body of the man. This crucial experiment proved that the paranormal information given had not been derived from the mind of anyone living, and that it had not been drawn from the stimulating object either, as Denton's theory of psychic impregnation would suggest.

Unlike Mrs Denton and Señora de Reyes, Osty's subjects did not have veridical hallucinations. Their 'visual images can always be seen to be reconstructions of ideas, notions, or knowledge'. Thus they tend more or less to symbolism according to the imagination of the individual subject. Thus death may be represented by a coffin, or by the thread of the Fates breaking. When they reconstruct a physical personality, they very often impersonate it, experiencing its physical defects and sufferings.

Mrs Piper was an excellent tactile clairvoyant.¹ In one of Hyslop's experiments, she described all the people who had touched a box containing an object.

138 *Part Played by Tactile Perception*

Osty considered the object a dispensable, but more or less powerful aid to the process. The object need not be impregnated with human 'fluid'. Touching a photograph is enough to evoke a person or a scene. The picture of a glass phial found in an ancient tomb in Syria stimulated the subject to describe events which were in agreement with archaeological knowledge. The object permits reconstruction of all the individuals who have touched it, without confusion but not necessarily in chronological order. Information can also be obtained about persons who entered their lives. When the contact is established, the object can be taken away and destroyed. Knowledge can be obtained about the whole life of the person, at whatever point of it he had contact with the object. The evocatory power of the latter is independent of its physico-chemical constitution, but

¹ O. Lodge, *The Survival of Man*, op. cit., p. 176.

seems to be proportional to the length of the period during which the person was in contact with it, and to its emotional association for him. Time and contact with other stimulating objects do not modify its effect.

Another observation which provokes thought is that a clairvoyant error committed by the subject when in contact with the person is liable to be reproduced when a different subject and experimenter are making use of an object connected with the same person. It is a law of metagnomy that a mistake in interpretation made by one subject tends to be repeated by other subjects and seems in a sense to accompany the person. Thus the agreement of clairvoyant revelations with different subjects is not a sign of their truth. Osty quoted a case in which eleven subjects reproduced, with variations, a mistake made by the first. This mistake may be caused by a subconscious suggestion from the person concerned, or by a misinterpretation by the subject of subconscious images, or by interference by the experimenter. The role of the latter should be only to prevent the subject from taking a false track at the outset, in the light of the knowledge he possesses. This interference with the automatic functioning of the metagnomic faculty may seem open to criticism, but is justified when one considers the complexity and tenuity of the points of contact.

Summing up, Osty clearly established that 'the object is only a means of communication between two human beings, between two systems of thought. The thoughts concerned are the subconscious ideas of all persons who have been connected with an object, which provides the raw material for the visions of the clairvoyant subject'. Two questions remain unresolved: the nature of the impregnation of objects and the source of information in the case of a dead person.

IV. PERCEPTIVE METAGNOMY

139 *Internal Autoscopy*

As we always have to return to hypnotism, we should mention that the magnetizers had often observed with their somnambulists phenomena of exteriorization and transposition of the senses, in particular of the sense of sight. This can also be displaced, either to read letters placed in contact with the pit of the stomach, or to leave the body and 'travel', often in distant countries, without regard for material obstacles. Somnambulists are known to walk

with closed eyes but with a perfect sense of direction; it is no explanation to say, as one often does, that they 'feel obstacles instinctively'. Hysterics can sometimes see their own internal organs, or those of people brought to them. Some sensitives write in complete darkness, or blindfolded; others can see inside a closed box, and so on. All these occurrences seem to belong to the same class of paranormal cognition, that of sensory clairvoyance in the present. These subjects are not reading thoughts, or interpreting human personalities; they seem to have a direct perception of material things.

Comar in 1901 and Sollier in 1903 gave scientific descriptions of the phenomena of internal vision reported by the magnetizers.¹ The first writer thought it was a question of 'auto-representation', and the second considered it 'autoscopy'. Sollier related this internal autoscopy to external autoscopy, which takes the form of seeing one's own 'double'. This interpretation cannot be accepted from the point of view of metapsychics, in which autoscopy is regarded as a form of perceptive metagnomy. The hysterical subjects, whose sensibility was being restored by hypnosis, saw their own hearts, ovaries, intestines and so on, and could point out the anatomical course of the blood-vessels leading to them.

These organs were described, using everyday language, as balls, pears, little engines, pipes, etc. Foreign bodies which had accidentally entered the body were located with precision. In a case described by Comar, a piece of bone which had lodged in the appendix and was causing the patient intense pain accompanied by fever, was perceived by him, together with the intestinal inflammation, and its course described until it was finally evacuated. Another subject followed the progress of a pin and the various disorders it caused in his intestine.

Sollier rejected suggestion and fraud as explanations. He did not regard it as vision, but as kinaesthetic sensation translated into visual terms. But he admitted he could not understand how the subjects saw colours; he ascribed this to imagination. It is also difficult to apply this theory to the perception of foreign bodies; he was obliged to assume that 'the intestinal mucous membrane can perceive the shape of a pin'. Autoscopy phenomena arise and vanish suddenly in hypnotic states or in a hypnoidal state favourable to clairvoyance. There is amnesia on awakening.

¹ P. Sollier, *Les phénomènes d'autoscopie*, Alcan, Paris, 1903.

140 *Transposition of Senses*

Of equal interest for psychical research is the phenomenon of transposition of senses, observed by Petetin at the beginning of the nineteenth century. In a somnambulist state, his subject correctly identified cards placed on his stomach. Reading with the fingertips is also well-known, and cannot be explained by tactile hyperaesthesia. Boirac quotes the case of a subject who, with blindfolded eyes and in a dark room, read the title of a newspaper and described a photograph, by touching them with his fingertips. Farigoule described, under the name of extraretinal vision, analogous phenomena which he ascribed to a 'paroptic sense'. The subject 'sees' with his fingers, forehead and the top of his chest, while a thick bandage covers his eyes. But contact is not always necessary and, with training, the range 'extends to infinity'. This proves that it is a question of perceptive metagnomy and not, as this author believed, of microscopic visual organs, the *ocellae*, scattered all over the skin. Physical and physiological explanations usually fail in metapsychics, but in the particular case of transposition of senses, they are almost ridiculous.

A subject studied by Chowrin before the Medical Society of Tambor in 1894, recognized by touch the colours of an object, even when it was wrapped in tissue paper; the only errors arose from the confusion of complementary colours. He also stated the shade of coloured light projected on to his fingers. This subject also showed transposition of the sense of taste. Pads soaked with various odourless solutions were placed anywhere on his skin, under the armpit for example: in a short time the subject described the taste of the substance.¹

141 *Cryptoscopy*

Sensory hyperaesthesia, which is often given as an explanation of these phenomena, does not apply to the case where there is no contact between the skin and the object; as when, for example, the object is enclosed in a box. These experiments have been given the name *cryptoscopy* (*krypton*, hidden, *skopeô*, I see). Reading a sealed letter is a typical example. The name of Alexis stands out among those of somnambulists gifted with this kind of clairvoyance. He

¹ N. Chowrin, *Experimentelle Untersuchungen auf dem Gebiete des räumlichen Hellsehens, der Kryptoskopie und inadäquaten Sinneserregung*. Reinhardt, Munich, 1919.

provided the Second Empire with gossip as Home did in the field of physical phenomena.¹ Robert Houdin, the famous conjurer, was convinced by the evidence he gave. Playing cards with him, Alexis, with blindfolded eyes, named the cards dealt to him before they had been picked up, although his partner hid them under the table. He read papers inside Robert Houdin's wallet and described to him the characters and lives of the people who wrote them. Robert Houdin said it was 'completely impossible for chance or skill to produce such marvellous results'.

We may regard as cryptoscopic the experiments in card-guessing which are so fashionable with the English-speaking nations since the work of Rhine, when the possibility of telepathy is excluded. But with a subject of the calibre of Alexis there would be no need to make statistical assessments.

In his researches in 1886, Richet gave a subject called Alice envelopes containing drawings which had been prepared by one of his colleagues. The reproductions were very striking, and showed that Alice did not perceive the idea of the drawing but the shape of it: thus she drew a bird for a bottle, and interlocking circles round a straight line for a caduceus.

Chowrin's subject deciphered lines of writing in a sealed envelope, sometimes all at once, sometimes by successive approximations. She explained that to succeed she had to wish intensely to read the letter and try to enter the enclosure mentally; then she fell into a state of half-sleep. The clairvoyance occurred in flashes. According to the length of these, she had a hallucination of written words or of complete sentences. She saw the size of the letters, the shapes, and other details. But it sometimes happened that she perceived only the sense and gave a dramatic interpretation of what was written. The precautions taken by the experimenters to ensure that the envelopes were safely sealed were extraordinary. They went to the length of writing on photographic film.

The experiments of Wasielewski and Tischner² gave analogous results. Picture postcards, drawn at random from a pack and placed in an opaque envelope, were accurately described. When the text was not completely deciphered, the words recognized were exactly in the positions which they had on the original, which

¹ Marcullet, *Le sommeil magnétique expliqué par le somnambule Alexis Didier en état de lucidité*, Dentu, Paris, 1856.

² *Ueber Telepathie und Hellsehen*, op. cit.

indicates actual vision. With the subject *R*, the same success was obtained: numbers were nearly always given correctly, words in foreign languages recognized and spelt, and drawings reproduced.

Reese, who was studied by Schrenck-Notzing and Maxwell,¹ asked for questions to be written on pieces of paper that the experimenter mixed together and shut up in drawers. Without leaving his place, Reese gave precise answers to the questions, even when they referred to past or future events. 'It is not a case of thought-reading, but of cryptoscopy,' remarked Schrenck-Notzing. But that could be disputed.

Kahn possessed the same gift as Reese. He was discovered by Schottelius in Germany,² and his gifts were recognized by two official examinations. When he was studied in 1925 at the Metapsychic Institute³ he convinced a large number of Professors and persons in official positions. His proceeding was the same as that of Reese. The persons present each wrote a sentence on a piece of paper which they folded or rolled into a ball. The notes were mixed and everyone took one at random. Sometimes some of the notes were burnt. Without going near the sitters or touching the notes, Kahn stated without mistakes the contents of each note and its writer. He sometimes asked to touch the paper when his faculty was not sufficiently stimulated. Telepathy is the most probable explanation.

142 *Experiments with Ossowiecki*

Some very convincing experiments, which I was able to verify, were carried out by Geley and Richet with another remarkable clairvoyant, the Polish engineer Ossowiecki. They were never unsuccessful. On a piece of paper in an opaque envelope, I had written this quotation from Pascal: *Man is only a reed, the weakest thing in nature, but he is a thinking reed*. This is what Ossowiecki said: 'This is about humanity, or man rather. . . . It is a creature, the most stupid. . . . It is something about man. . . . I have an impression of stupidity. . . . It is a proverb. . . . These are the thoughts of one of the greatest men of the past. . . . I think Pascal. . . . Man is weak; a feeble reed, but . . . weakness . . . and also the most thoughtful reed'. This gives an impression of being telepathic, but

¹ *Ann. des sc. psych.*, 1913, p. 66.

² *Ibid.*, 1914, p. 65.

³ *Revue métapsychique*, 1925, 2 and 3.

some of Ossowiecki's statements seemed to be purely cryptoscopic. Thus, for example, the subject identified a portrait of Marshal Pilsudski, which had been enclosed in a thick lead tube, and described the details of it exactly.

In another series of experiments with Richet, Ossowiecki recognized a quotation from *Chantecler*, by Mme de Noailles, but without identifying the copyist. Another time Sarah Bernhardt wrote: 'La vie nous semble belle, parce que nous la savons éphémère!' The clairvoyant read the signature and thought he saw: 'La vie semble humble'. He could not read 'éphémère', because he did not understand the word in French; but he described it as a word of eight letters. And he perceived the final exclamation mark.

At the Warsaw Conference, Ossowiecki deciphered in the presence of five or six persons, including myself, a document which had been prepared in England by Dr Dingwall, Research Officer of the English S.P.R. It was a sheet of paper folded in two; on the front was the drawing of a bottle in a frame and the date, *Aug. 22, 1923*; on the back was a common sentence about wine. Ossowiecki drew the bottle accurately and read the date, with the exception of the month, which he gave as 'something written, perhaps the town'. He also said that there were lines of writing on the back, but he could not read them, because he was tired by the first part of the experiment. The paper was enclosed in three envelopes and as a defence against fraud, it was pierced with needle-holes in such a way that the slightest manipulation would have disturbed their exact coincidence. This reading took place under our own eyes. Many other experimenters have remarked on the extraordinary faculty of this great clairvoyant who was, in private life, an engineer and an accomplished gentleman.

143 *Mrs Leonard's References*

Mrs Leonard was a great English medium who was made famous by Lodge's *Raymond*.¹ Her gifts were almost as remarkable as those of Mrs Piper in describing the past experiences of her sitters, but she surpassed her in cryptoscopy. At the suggestion of Stainton Moses, she gave Mr Drayton Thomas² an excellent series of experiments in reading in closed books. Intended to prove the existence of spirits,

¹ O. Lodge, *Raymond, or Life and Death*, Methuen, London, 1916. We shall return to this work which, like the following, was given as proof of survival.

² D. Thomas, *Some New Evidence for Human Survival*, Collins, London, 1922.

these experiments can easily be explained in terms of perceptive metagnomy. They were called *book tests*. The communicating spirit indicated the page and even the line of a book where a phrase would be found connected with an event, known or unknown to the sitter, which it was to recall. The book was not indicated by its title, but by its exact position in the sitter's library, or even in a library which he had never entered. Thomas continued these experiments with Mrs Leonard for five years, from 1917 to 1922. They covered more than 100 sésances, during which the medium was in a hypnotic state and controlled by her usual guide, Feda. The communicator was Mr Thomas's father. He opened the demonstrations with a quotation appropriate to the raps which he made at night in his son's room. 'When you go home,' he said in the voice of the medium, 'take from your bookcase the fifth book from the left on the second shelf from the bottom, and read at the top of page 17.' The volume turned out to be by Shakespeare. In the third line from the top of page 17, Thomas read this sentence: 'I will not answer you with words, but blows'.

Another day the quotation was connected with a remark Thomas had made at a séance round a table at the home of two ladies unknown to the medium. To eliminate the theory of subconscious memory, Thomas asked a friend to choose a book from his bookcase. The quotation test succeeded. It also succeeded when the communicator chose a book in the friend's library. Finally, a crucial experiment: Thomas had a collection of old books, taken by a book-seller at random from his stock, sent to him without knowing the titles. Even when shut up in an iron box, these books were read by the medium in the same way. Out of a total of 348 experiments, there were 242 successes, forty-six vague or doubtful and sixty unsuccessful. The reality of clairvoyance is established especially by the character of the replies and their agreement with the religious outlook of Thomas's father. In these experiments the synthesis of prosopopesis and metagnomy was perfect, but these two functions nevertheless retained all their independence. The metagnomic faculty shown is inferior to that of the non-spiritist subject Ossowiecki, because of the greater coefficient of error.

Perfecting this method, Mrs Leonard applied it to precognition. The spirit of Thomas senior announced on the previous day items that would appear in the next day's *Times*, giving the approximate position they would occupy. Usually he gave proper names which

suggested persons or places known to the Thomas family. At the time when the communication was made, the items had been more or less decided upon, but not arranged in pages. Out of 104 references given, seventy-three were correct and eighteen attributable to chance. Mrs Leonard's powers of prophecy seemed to be limited to the immediate future.

144 *Sight at a Distance*

All the experiments that we have so far described concerned objects in contact with the subject, or in his immediate vicinity. But perceptive metagnomy has an almost limitless radius of activity. The subject studied by Dr Ferroul, the mayor of Narbonne, read sealed envelopes and saw distant events when in the hypnotic state. On October 28, 1897, Professor Grasset sent from Montpellier to M. Ferroul a carefully sealed envelope in which was an interior envelope of tinfoil. The note enclosed, folded in two, bore two lines of French poetry, a Russian, a German and a Greek word, and finally the date. Leaving the envelope at home, M. Ferroul went to the somnambulist's house, 300 metres away, to give her warning of the experiment. But she wanted to carry it out at once. In trance, she described in a minute and a half the letter with the black seal and the silver paper inside it, read the two lines of poetry, omitting the word *too* and the date; as she did not understand the other words, she only described the form of them. Grasset stated that the envelope was returned to him intact.¹

In other experiments, the subject perceived clearly the actions and gestures of a group of experimenters at a considerable distance, and described them to a second group who took down her description in shorthand. This kind of phenomenon was often observed in the days of animal magnetism. It was called 'travelling clairvoyance'. The subject was ordered to go mentally to a certain place, even one unknown to him, and to say what he saw. The famous Alexis visited in this way the rooms of President Séguier and told him that there was a bell on his desk, which Séguier disputed, but was found to be correct.

A precisely similar experiment was carried out by Richet with the subject Alice. She went mentally to le Mans and discovered a house which was known to one of the sitters, giving details about it which were unknown to him. In all such cases, which are very numerous in

¹ *Ann. des sc. psych.*, 1896, p. 196; 1897, p. 326.

the literature of psychical research, the subject seems to be displaced spatially: he crosses a countryside, follows a river, sees a town, crosses roads, climbs staircases, and so on. Osty says this is a symbolic way of speaking and there is no direct vision. Obviously, since there is no physical displacement; but the problem is to know whether the mind cannot be directly aware of things; if there may not be a human 'double' with all the sensory faculties, and able to transport itself instantaneously to any point of space.

A careful research by Dr Hornell Hart at Duke University¹ brought to light 249 cases of 'extra-sensory projection', as he calls cases in which the subject reports events as if he was present, from a point of view other than that of his physical body. In sixty of these cases the events or places described had previously been the subject of a written or verbal description. These must therefore be eliminated. We shall study these phenomena in Chapter IX.

145 *Clairvoyance or Telepathy?*

The empirical category that we have called perceptive metagnomy or clairvoyance exactly covers the domain of 'extrasensory perception'. We must therefore examine, as Rhine did with his card-experiments, whether telepathy may enter into these cases. It is easy to see that the phenomena are partly explicable by telepathy. When the subject describes an object inaccessible to his senses, his description is usually not a vision of the present, but retrospective. He penetrates into the writer's past, and sees him writing, and he becomes aware of his thoughts either at the time when they originated, or at the time when they took written form. This theory is the more probable that he often adds to his paranormal reading information about the writer and his surroundings. In the famous experiment at Warsaw, Ossowiecki described the writer of the letter, Dr Dingwall, and the scene when the envelope was handed to the experimenters. In another experiment, still more suggestive, he not only reproduced the drawing enclosed in the envelope, but he also described the one that the experimenter had thought of drawing, but given up.² Finally, there are cases in which the subject cannot distinguish between intention and fact, and the two are mixed in his vision. All this is in favour of the purely telepathic

¹ *Paper No. 1* at the Utrecht Conference, 1952.

² G. Geley, *L'ectoplasmie et la clairvoyance*, Alcan, Paris, 1924, p. 93.

view of this kind of clairvoyance. The object, on this theory, plays a purely stimulating role.

However, if the psychological construction of the vision is analysed, a suspicion is formed that there is more concerned than telepathic communication. The effort made by the subject to 'penetrate' into the object (symbolic as this effort may be); the words which he cannot read, but of which he gives the number of letters; the objects which he cannot recognize, but of which he describes the shape and peculiarities; the material obstacles which sometimes hinder his vision (may this perhaps be due to auto-suggestion?): all suggest another kind of clairvoyance. This assumption is confirmed when all possibility of telepathy is excluded. The simplest experiment of this kind is that in which a card is drawn at random from a pack and *not seen by the experimenter*. This can be explained by precognitive telepathy; for if the card will be known to the experimenter after the guess has been made, then it is already in his mind. Rhine does not hesitate to have recourse to this explanation. But in parapsychology, as in all other sciences, the most complicated hypothesis must not be used when simpler ones are equally good.

146 '*Radiations*' from Objects

As in pure telepathy, some authors suggest a physical hypothesis; they postulate that objects give out 'radiations' characteristic of their shape and peculiarities. In the case of a playing card this would require the black ink of the ace of spades, for example, to send out waves or corpuscles which pass through the card, enter the eye and stimulate the optic nerve. This type of explanation has been suggested for the vision through opaque bodies demonstrated by a young Spanish clairvoyant.¹ According to this theory, concentration would cause the subject's brain to emit rays of 'dark light', analogous to the famous N rays of Charpentier and Blondlot, which would pass through obstacles, go to illuminate objects and return to stimulate the retina.

But there are invincible objections to this. Why should the incident ray pass through a thick piece of metal (like the lead cylinder in the experiment with Ossowiecki) and obediently stop at a piece of paper, or rather at an infinitesimal deposit of ink upon it? How can the reading take place when the paper is folded, for the radiations

¹ *Compte rendu du Congrès de Varsovie*, op. cit., p. 326.

from the letters must form an indecipherable chaos? In one of Richet's experiments with Ossowiecki, the paper was rolled into a ball; in others, carried out by Schrenck-Notzing with Reese, and by Osty with Kahn, the paper had been burnt.

The hypothesis of cryptoscopic radiation is therefore puerile, and it is difficult to see any theory that can explain the facts, other than that of immediate paranormal perception. We shall see that this is not excessively fanciful, for it was admitted in principle by Bergson. Indeed, he placed perception in things themselves and reduced sensory impressions to a stimulatory process, depending on the brain and not on the mind. Knowledge of the external world, although translated into sensory images, could thus theoretically be obtained without the mediation of the senses. (287).

V. ONEIRIC METAGNOMY AND VARIOUS METHODS OF DIVINATION

147 *Metagnomy in Dreams*

In sleep the individual is cut off from the external world, probably so as to repair his organism. A dream is thus a state of inattention to life, in which the restricted field of consciousness is open to the play of memories and instinctive urges. Freud thought that dreams expressed, almost always veiled in symbolism, the desires which were not permitted free expression by the constraints of social life. But man has more than instinctive desires, he has also numerous emotions which take part in organizing the images of dreams. What interests us from a psychical point of view is that a dream (of which reverie is a more controlled form) is closely related to hypnoidal states. There are profound analogies between ordinary sleep and the sleep of hypnosis or trance, which show themselves in a common inclination to prosopopesis and metagnomy. Myers brought out the analogies particularly well.¹ He showed that the hypnotic memory, inaccessible to the waking consciousness, was available in dreams; and conversely, dreams which were forgotten in the waking state could be remembered during hypnosis.

Sleep most resembles hypnosis in the favourable conditions it offers to psychic communications. There are many cases of telepathic and precognitive dreams. Dream images of this kind can assume hallucinatory intensity. Ruskin reported the case of a lady who woke

¹ F. W. H. Myers, *The Subliminal Consciousness*, op. cit.

with a start, feeling that her lip had been split by a violent blow, and put her handkerchief to it, expecting it to be covered with blood. At that time her absent husband was injured in the mouth by the tiller of his boat.

Visual oneiric hallucinations often consist of *hypnagogic* images which occur at the time of falling asleep, or *hypnopompic* images which arise on awakening. These images are extremely clear and brightly coloured. There are also symbolic clairvoyant dreams, or dreams which take a spiritist form. The psychic elements of dreams have the same characteristics as in the forms studied in the previous chapters.

148 *Forms of Divination Known Since Ancient Times*

It is the same with the various forms of divination known since ancient times, such as cartomancy, chiromancy, divination with coffee grounds, sand, white of egg, candle, pins, etc. These are all methods used by clairvoyants to produce a favourable hypnoidal state. The predictions of the Tarot and the life-line are nonsense. Even in graphology, the best results are due to clairvoyance. Figures on cards, grains of coffee grounds, flocculence in egg-white, etc., are means of stimulating subconscious vision. In the two last cases, and in analogous ones, a cluster of points or an entanglement of lines provides the subject with points of reference on which to build a hallucination.

Myers excellently studied this problem of the exteriorization of internal images.¹ A good recent study was also made by F. E. Leaning.² But the subject is far from exhausted. We believe it is necessary to accept the principle of the reversibility of the visual image. In the same way that the mental image is the perception of the material image formed on the retina, so a representative mental image can create an objective image localized in space, if there are real points of reference. Like Dr Verrall, I have been able to produce voluntary hallucinations of this kind, with a little training.³

Certain experiments in telepathy show that the reception of the subconscious 'message' is favoured by looking at external objects.

¹ Ibid.

² F. E. Leaning, 'An introductory study of hypnagogic phenomena', *Proc. S.P.R.*, Vol. 35, Part 94, 1925.

³ *Personnages d'au-delà*, op. cit., p. 164.

In one of Rawson's experiments,¹ the percipient guessed the transmitted image of a clock while looking at a real clock in front of him. An even more significant experiment was when a sculptured and gilded trefoil on a frame hung near the subject suggested to him to draw two of its leaves, which approximated very closely to the shape transmitted, that of an hour-glass. An entanglement of many lines in certain forms of divination gives the subconscious image every opportunity to become externalized.

149 *Crystal-Gazing*

It is nearly the same with staring at reflecting surfaces: water, oil, mirrors, glass balls, etc., which have been used since time immemorial. Much has been written on this type of clairvoyance, especially in England where there is a Crystal-Gazing Society. Psychologists have taken an interest in this phenomenon, but without wishing to admit that it contained any psychic element. Janet, for example,² regarded specular hallucinations as only 'memories acquired at certain times, information registered, reveries or conclusions already drawn'. He considered them, like automatic writing, a sign of dissociation of the personality and thought they were more often found with the mentally ill than with really healthy people.

Myers did justice to this current opinion. Nothing is better established today than paranormal vision in mirrors, which is only one variety of metagnomy. Miss X,³ who inaugurated this type of research at the English S.P.R., classified her visions into three groups: memories and fanciful images; combinations or elaborations of memories; paranormal visions. All these pictures were in realistic colour and seemed objective when enlarged by a magnifying-glass. This conforms to the law stated by Binet and Féré:⁴ the imaginary object in the hallucination is perceived as if it were real. The production of after-images and of complementary colours with Miss X and other subjects confirms that specular hallucination is identical with hallucinations caused by hypnotic suggestion. We shall return to this when we study apparitions. When Miss X saw pictures, they were never larger than their specular frame. They lasted up to eight

¹ G. Rawson, 'Experiments on thought transference', *Proc. S.P.R.*, Vol. 11, Part 27, 1895.

² *L'automatisme psychologique*, op. cit., p. 406.

³ 'Recent Experiments in Crystal-Vision', *Proc.*, Vol. 5, Part 14, 1889.

⁴ *Le magnétisme animal*, op. cit., p. 168.

minutes. Usually the pictures are rapid and animated like a cinema film. There are also written messages. Paranormal information sometimes takes a symbolic form, as in the general case.

When one wants to look into a crystal, one takes up a position in full or half light, seated in front of the ball which has a background of black material. This ball, between 1 and 10 cm. in diameter, may be of plain or slightly coloured glass, or better, of rock crystal, as Maxwell recommends. One looks into the ball. After a short time its transparency changes and visions appear. Crystalloscopy is an excellent way of receiving telepathic communications.

Using a sea shell, auditory hallucinations can be obtained which resemble either voices or music, and may contain psychic information.

150 *The Divining Rod*

A remarkable phenomenon of perceptive metagnomy, which has been known since antiquity under the name of *rhabdomancy*, is the use of a divining rod to discover underground springs, metals and minerals. Subjects with this ability are called water-diviners or dowzers. They use a forked stick, traditionally of hazel, in the shape of an inverted V and about 40 cm. long. This rod is held vertically with one branch in each hand, the palms being upward and the elbows held near the body. As the dowser walks over the ground, the rod makes irresistible movements in one direction or the other if there is water underneath.

This phenomenon, which had been studied since 1852 by the Academy of Science, received official recognition in 1913. Some buried metal objects were found, and dry underground caves accurately outlined. Equally precise results were obtained in the presence of Professor Viré of the Museum, by MM. Probst, Pélaprat and Mermet, over the gulf of Padirac. The depth of the water up to twenty metres was precisely stated by the dowzers.

Every dowser has his own personal methods and reactions, which confirms the psychic character of the phenomenon. M. Landesque¹ uses a plumb line, which oscillates in the case of a stream and twirls to indicate a cave. In this case the presence of metals, even of coins in a pocket, can exert a disturbing influence. The phenomenon can also be mentally inhibited, as in the case of all other psychic

¹ P. Landesque, *Hydrologie et Hydrosophie*, Dunod, Paris, 1921.

phenomena. Dowsers obtain by experience an extraordinary degree of skill in locating and describing subterranean formations.

In his famous paper, Chevreul ascribed the movement of the divining rod or exploring pendulum to the diviner's unconscious muscular movements. But this is only the beginning of an explanation, for we must also ask why the subconscious mind should have so precise an awareness of concealed objects. It has been suggested that the diviner unconsciously notices signs above ground of the presence of water, but this argument cannot be applied to the case of ores and does not explain how the depth can be given to within a metre. Another explanation uses the hypothesis of characteristic radiations from objects. Landesque thinks that water and metals emit radiations which are perceptible to diviners. As he has seen his rod move when held over a reclining human body, he considers the human body also to be a source of radiations. But autosuggestion is an important factor in these occurrences. It may be the explanation of the fact that some diviners say they lose all their power if they put on silk or wool gloves.¹

151 *The Superstition of 'Radiesthesia'*

The history of the divining rod, according to Chevreul, shows that it was used in the fifteenth century in France to discover mineral ore. Gradually its use was extended to obtaining all sorts of information, even to assisting in the arrest of criminals. The eighteenth-century rationalists, not wishing to ascribe its powers to supernatural beings, explained them by magnetism and electricity. The abbé de Vallemont, in his *Physique occulte*, suggested that all bodies, water and metals as well as stolen objects and the bodies of murderers, give off 'corpuscles' which act on the rod by a kind of transpiration. 'They rise vertically in the air and impregnate the rod, which moves in such a way as to become parallel to the vertical paths of the rising corpuscles.'

Equally fantastic explanations, adapted to modern scientific knowledge, are offered in our own time by the diviners who call themselves 'radiesthetists'. Hidden objects are no longer supposed to emit corpuscles, but to radiate waves. They claim to measure the wave-length of these waves with apparatus added to their pendulum, and equally unscientific, since it cannot work without the operator's

¹ Cf. W. Barrett, 'On the So-called Divining Rod', *Proc. S.P.R.*, Vol. 13, Part 32; Vol. 15, Part 38, 1897-1900.

intervention. Omniscient powers are claimed for such apparatus; it can locate underground water as well as diagnosing illnesses. But the chief aim of radiesthesia is to take the place of orthodox medicine, not only in diagnosis but also in treatment. The remedies used are those of which the 'vibrations' correspond to the disorders indicated by the pendulum.

We need hardly say that these divagations have no scientific value. The rare successes of which radiesthesia can boast are due to the clairvoyant faculties of its practitioners, and physics plays no part in them.¹ The best demonstration of this has been provided by certain radiesthetists who discover distant hidden objects and other clairvoyant information by suspending their pendulum over a map.² The apparatus is only an arbitrary means of conveying subconscious revelations, as are trance utterances, automatic writing and table-turning.

VI. PRECOGNITION

152 *Types of Precognition*

Clairvoyance of the future, called *prevision*, *prophecy*, *premonition*, *presentiment*, *prescience* or *precognition*, is rarer than clairvoyance of the present and the past, but is equally well established. It is indeed easier to establish, by means of well attested verbal or written statements made before the event. It occurs in subconscious states. Like the other forms of clairvoyance, it may take a hallucinatory form. If it does, the visions are clear and coloured, and unfold themselves like a moving picture. Sometimes they are vaguer and the details are blurred in places. In experimental clairvoyance visions may elaborate themselves when the subject's attention is drawn to a certain point. Sometimes, again, they may be symbolical, when the subconscious imagination has to translate too confused an impression. The images are not always visual; they may be auditory, olfactory, etc., as in the case of telepathy.

¹ Two papers at the Utrecht Conference, one by S. W. Tromp (No. 29) and the other by J. Wust (No. 34), maintain that diviners sense variations in the earth's magnetic field and the electrical resistance of the ground, although this has nothing to do with 'radiations from objects'. But such sensitivity would not suffice to explain the exploits of the radiesthetists, who are more and more abandoning geological prospecting. It does not explain those phenomena which take the form of perceptive metagnomy, while perceptive metagnomy does explain the phenomena of rhabdomancy.

² Cf. the paper by J. Treyve: 'Mes prises de connaissance à distance par le procédé du pendule', *Revue métapsychique*, No. 3, 1935.

Spontaneous precognition is common and nearly always occurs in dreams. It usually has a character of personal warning, and informs the subject of events, usually serious, which are about to happen in his life or the life of someone close to him.¹ Premonitions of death are very frequent, but it is not unusual to foresee insignificant events without much emotional importance for the subject. To take a recent and well-attested case, a physical medium named Stella C. interrupted a telekinetic séance to describe an event which occurred thirty-seven days later; she had a detailed vision of the front page of a newspaper.²

Precognition may appear in automatic writing, the various forms of divination, or mediumistic séances. It assumes a definite experimental character with certain subjects who are presented with a certain person. It then shows the remarkable characteristics which were so well described by Osty. Even when allowance is made for rational inference, the precognition is more abundant and exact when the subject is well acquainted with the life of the person concerned. The precognition is not constant in precision, and seems to become more detailed as the person's life progresses. The strength of the precognition decreases as the time-interval before fulfilment increases. This is a universal characteristic. Half of all spontaneous prophecies refer to events falling within the next month, two-thirds within the first two months. Those which do not occur for some years are rare, but we shall quote some cases. When describing the future of an individual, the subject perceives only general trends and outstanding episodes.

An important characteristic is the way in which time is estimated. Certain dates can be predicted. But the estimation of time is often very wide of the mark: a subject describes a distant event as being only a short time ahead, and *vice versa*. Another may describe a future event as if it were in the past. The images perceived have no

¹ The dream may be very complicated in form. Dr Eisenbud, an American psychoanalyst, communicated to the Utrecht Conference (Paper No. 31) a case concerning two of his patients with considerable psychological conflicts, whose preoccupations affected the life of their analyst, as is often the case. He was analysing their dreams. One day Dr Eisenbud sent to a periodical an account of a certain unsuccessful experiment in hypnosis, in which a subject was asked to predict two days in advance part of the contents of a newspaper. The two patients both achieved this prediction in their dreams, differently from one another, without Dr Eisenbud having ever spoken of it to them. The prediction was correct. This case shows collective psychism as well as precognition.

² H. Price, *Stella C.*, op. cit.

characteristic which distinguishes their place in time. This can only be found by analysing spatial landmarks.

153 *False Precognition*

There are several varieties of false precognition. It may be caused by coincidence, rational inference, telepathic inference, autosuggestion resulting from the precognition, incipient organic symptoms or paramnesia.

In the first case, the likelihood of the description coinciding with a future event by coincidence is smaller if the description is detailed and the event unexpected. If a young girl is told that at the age of twenty she will marry a young man with fair hair, the prophecy has no value for psychical research. Richet classifies as coincidental a prediction made to the son of A. Wallace, a student of chemistry, that in February or March there would be an explosion in his laboratory and that someone would be injured. To arrive at a correct assessment of this case it would be useful to know the frequency with which accidents occurred in the laboratory; but the cases which are accepted as genuine precognition are of so great an improbability that there can be no question about it. Bergson stressed this point in his study of telepathic hallucinations.¹ 'Statistics,' he said, 'are unnecessary here. A single case is sufficient, if I accept it with all that it implies.'

In the second case, that of events which could be foreseen by reasoning from known facts, it goes without saying that these have no relevance to psychical research. A well-informed person could have predicted the declaration of war in 1914 with less certainty than one predicts an eclipse, but with far more than that with which he could have foreseen the battle of the Marne.

Telepathic inference must also be considered in assessing cases of fore-knowledge. One of Richet's subjects, named Alice, told him that he was going to lose his temper in the presence of three or four people. This was fulfilled when one of his collaborators insulted M. Ferrari, manager of the *Revue bleue*, in the offices of the magazine. Richet was furiously angry and turned his collaborator out.² It is conceivable that the somnambulist read telepathically the intention of these three people to go to the offices on that day, the antipathy between two of them and Richet's nervousness, and that from these data she inferred the incident. If this is so, the case must be discarded.

¹ *L'énergie spirituelle*, op. cit., p. 74.

² *Traité de métapsychique*, op. cit., p. 462.

Even more important is the question whether we should discard cases in which the precognition is only normal telepathic information, announced before the event is known in the ordinary way.

154 *Autosuggestion and Paramnesia*

When a person knows the details of a prediction concerning him, it is possible that he will assist its fulfilment. He may do so consciously if the event predicted is a pleasant one, or unconsciously if it is unpleasant, by autosuggestion alone. Robert Browning quotes a case in which a lady dreamed that her deceased sister told her that she would be reunited to her in five years' time. The prediction was fulfilled, but it might be supposed that the lady's preoccupation with such ideas shortened the natural term of her life to the predicted length. The literature of psychical research abounds in cases in which people appear to make every effort possible to avoid a pursuing destiny. In Liebault's famous case¹ in which the prophecy was made by Mme Lenormand, the autosuggestion of death resulting from the prediction was neutralized by a completely successful counter-suggestion, but this did not prevent the death from occurring exactly as predicted.

We must also eliminate those cases in which there is a latent organic disorder which later results in a serious accident or death. Although the precision of date often gives such predictions a high degree of improbability, it would be unwise to place much reliance on them. *A fortiori* we must reject a prediction of a pregnancy unknown to the subject, as in the Samona case of alleged reincarnation.²

It is more difficult to make allowances for paramnesia. Many of us have experienced this curious sensation. We see something which gives us an instantaneous certainty that we have seen it before with all its details. Psychologists have often studied this phenomenon, but are sharply divided on the question of interpreting it. Bergson gives an excellent summary of the various hypotheses³ and concludes that this kind of false recognition is a 'memory of the present'. As a result of a slackening of 'attention to life' the memory is not detached from the perception which is forming it, and it

¹ *Thérapeutique suggestive*, p. 282.

² *Ann. des sc. psych.*, 1, 4, 6; 1913.

³ *Revue philosophique*, 1908, and *l'Energie spirituelle*, p. 117.

remains in consciousness, producing the illusion of a new and identical perception.

Without discussing this theory of paramnesia, which may be correct, we must observe that several kinds of phenomena, of which some are psychic, are ranged under this heading. The essential characteristic of false recognition is precisely that it is not a recognition, that is to say, it does not imply the existence of two identical perceptions separated in time. We shall see that it is much the same with some kinds of precognition, but instead of being simultaneous or quasi simultaneous, the memory is completely detached in time from the perception and, so to speak, precedes it. To put this more exactly, perception and memory have exchanged places: the state of primitive consciousness is a representation of which the actual perception seems to be a perfect memory. We shall call this phenomenon *duplicative precognition*.

155 *Duplicative Precognition*

This occurs often in psychical research, especially in dreams. Examples of it can be found in the original publications, or more conveniently in the collections made by Bozzano,¹ Flammarion,² and Richet.³ A classic example is the often-quoted dream of the Duchess of Hamilton.⁴ We here select two of the most remarkable cases, and shall consider first the case of the chevalier de Figueroa (Case 110 in Bozzano). In August 1910 he dreamed that he was in the country and, following a wide road, arrived at a cultivated enclosure where a peasant welcomed him. He followed him into a stable and then into the house, where there were two women, one old and one young, and a child. The features of these three persons, as well as the details of their home, remained clearly fixed in the mind of the chevalier, who told his wife on awakening, and later told various distinguished people about it. He had seen the mule standing in the stable door, the tomatoes and onions in the kitchen, and the very high and unusual bed in the bedroom. The following October he had to assist a friend in a duel, and was taken in a car into an unfamiliar countryside near Naples, where he recognized the

¹ *Dei fenomeni premonitori*, Luce e Ombra, Rome, 1914.

² *La mort et son mystère*, 3 vol. Flammarion, Paris, 1920-21.

³ *Traité de métapsychique*, op. cit.

⁴ *Proc. S.P.R.*, Vol. 11, p. 505.

wide road and cultivated enclosure of his dream. He told his friend, and described to him the nearby house and its outbuildings. Then the rest of the dream was fulfilled: the peasant came to meet him and led him to the house where he saw the mule, the tomatoes and onions, the two women and the child, and the unusual bed. All this was exactly as in the dream.

Another case in point is that of the abbé Garnier.¹ We shall quote also the Saurel case, equally well attested by statements made before the fulfilment. In 1911 M. Saurel dreamed that he was in an unknown meadow landscape. He was facing the main façade of a kind of castle stronghold, from which he was separated by a stream. Men dressed in blue and wearing curious helmets were drawing water from the stream and making fires near piles of guns. He was in command of these men, and was giving orders for the encampment. This dream was completely realized during the war, in a village in the Aube district where M. Saurel was training recruits. He recognized the setting of his dream, with the exception of the stream. He was so sure of its existence that he began to look for it, and found it on the other side of the castle, where he also recognized the main door with its brick columns. By this time his men had made piles of their rifles, and he realized with a shock that the scene was now an exact duplicate of his dream.

We shall mention finally a more recent experimental case reported by Soal in 1922.² At a séance with an excellent medium, named Mrs Blanche Cooper, a 'spirit' communicator appeared which claimed to be Gordon Davis, an old school friend of Soal's. He recalled that he had met Soal one day on the platform of a railway station. He had been killed at the front during the First War. He gave detailed evidence of his identity which was found to be correct. At another séance the medium added a detailed description of his house at Southend. Three years later Soal learnt that Davis was alive, and he found that the house in which he was living agreed with the description given by Mrs Cooper in every detail: external appearance, furniture, pictures, presence of his wife and child. But at the time of the séance *Davis had been living in London and had no idea of moving to Southend.* Thus the medium had produced a remarkable example of precognitive clairvoyance.

¹ *La mort et son mystère*, I, p. 277.

² 'A report on some communications received through Mrs Blanche Cooper', *Proc., S.P.R.*, Vol. 31, Part 96, 1925.

156 *Symbolic Precognition*

Osty states that he never encountered this type of perception, which corresponds exactly to a future reality. 'Visual images,' he says, 'have always been shown to be reconstructions of ideas or information.' This is explained by the fact that Osty only studied subjects who specialized in precognition of the future of human beings, and so he neglected all that we have called perceptive metagnomy. It would, however, be a mistake to think that paranormal knowledge reaches the subconscious mind in a kind of unknown language, which is then translated by the mind into sensory images, homogeneous with the rest of experience. There is no need to have recourse to this theory of a mysterious coded language to explain the symbolical images which are often employed by clairvoyants, as we have seen in the case of Pascal Forthuny (130).

Symbolism is so intimately associated with our normal thinking life that it is not surprising to find it in the expression of paranormal thought. It is characteristic of a certain kind of imagination, which Ribot calls mystical imagination. The mystic transforms all concrete images into symbolical images. His mind does not limit itself to treating representations in this way, but works also upon perceptions, so that reality appears to him as a collection of symbols. There are many subjects who possess the mystical imagination, if not the mystical awareness. Their descriptions of their clairvoyant states are not translations from an unknown language, from the 'vibrations of reality' as Richet called them; they are translations from the vulgar tongue, that is, from the sensory images in everyone's memory.

But one might be surprised that a subject whose imagination is not usually mystical should tend to translate a clear message into symbolical language. For example, if he sees an accident in which a man is killed, he may picture the man to himself with a luminous cross or an open coffin. We may suppose in this case that the informing image is too vague, or else that it is at too deep a level of subconsciousness to reach consciousness in its original form. The mind fails in its intuitive attempt, but not completely, and the elements of truth that it has grasped are immediately clothed in symbolism.

The same effect is observed in telepathy when the 'transmission' is bad, or when the passage from the subconscious to the conscious

mind is blocked. We know, for example, how difficult it is for proper names to make this passage. In this case, as in many others, the translation is symbolical because the sensory text cannot emerge. In other cases, the impression is too distant and vague and the symbol merely expresses the general sense. When he said that precognition was 'in constant and progressive elaboration', Osty did not distinguish between the faculty of the mind which gains information, and that faculty which makes the information emerge into clear consciousness. It is the information which evolves and perfects itself, and not the mental or material reality which it represents.

157 *The Empty Chair Experiments*

While studying the clairvoyance of Pascal Forthuny, Osty designed an experiment in precognition which was carried out in 1926. Two hours before the clairvoyance séances at the Institut Métapsychique, he asked two witnesses to indicate an empty chair in the room, and asked the subject to describe the person who would be sitting there. Forthuny dictated his prediction, which was written down in private. When the audience of 200 had arrived and seated themselves at random, as is usual in lecture-rooms, the subject went to stand in front of the chair indicated. He then read his prediction, which contained a description of the physical and mental health of the person seated in the chair, as well as some of the striking events in his life, and predictions for the future.

On one occasion the person was a lady, who explained that she had nearly stayed at home, and that her choice of seat was unpremeditated, because of the jostling. This lady also recognized as accurate the physical and mental details given by the subject.¹

On another occasion the person selected was completely unknown to Forthuny, but the experiment was equally successful. The chair selected was 'in the second room, at the bottom of the bookcase beside the fireplace'. An exact description of the man's characteristics was given as well as information about his profession (man of letters, connected with archives and local history), and numerous other details of which the combination could not be explained by chance.

The empty chair experiment was later repeated 150 times at the University Laboratory of Parapsychology at Utrecht by Professor

¹ E. Osty, *Pascal Forthuny*, op. cit., p. 102.

Tenhaeff with an excellent clairvoyant, Gérard Croiset.¹ The chair was selected at random. When the subject said he received no impression, the chair was later found to be unoccupied. The information given was verified on the spot by Tenhaeff, and was always correct. Sometimes the information referred to the person sitting on a chair beside the selected one. At other times, the information was a mixture relating to a number of people who successively sat on the chair indicated. Croiset is very sensitive to tactile impressions but dislikes card experiments which do not stimulate his faculty at all.

158 *Statistical Experiments*

Rhine carried out thousands of trials of precognition with his best subjects, who included Pearce and Zirkle. A pack of twenty-five Zener cards was placed before the subject, who was invited to write down the order in which the cards would be after shuffling. He obtained critical ratios between 6.3 and 10.7, which went far to establish the existence of the precognitive faculty.

In reply to the subtle objection that the experimenter might have known clairvoyantly the list written down in advance by the subject, and arranged the cards to agree with it when he shuffled them, Rhine used mechanical shuffling. He complicated his experiments still further to deal with the possibility of telekinesis (193) affecting the results. Thus he arrived at statistical results which Soal considers artificial and inconclusive.² Here we must point out the striking superiority of qualitative experiments, which produce immediate certainty.

We must also mention Tyrrell's experiments with Miss Johnson, using an ingenious apparatus. The subject had to guess in which of the tightly closed boxes an electric light bulb was switched on. This was completely successful as a test of simple clairvoyance. It also gave good results when the subject was asked to guess *before* the choice of box to be lighted was made at random. The time interval was very short, a fraction of a second.³

159 *The Collective and Impersonal Future*

The literature of psychical research contains very few cases of precognition of collective events. Subjects seem to be aware of such

¹ 'Precognition in the qualitative experiment', *Paper No. 38* at the Utrecht Conference, by Professor Hans Bender.

² *Modern Experiments in Telepathy*, op. cit., p. 77.

³ G. N. M. Tyrrell, *Science and Psychical Phenomena*, Methuen, London, 1938, p. 92.

events only by their effects on individual minds. The uninformed were astonished that the Great War had not been clearly predicted. An English writer, Mr Piddington, who studied 3,000 automatic scripts by a group of English automatists, concluded that the predictions in general terms of the war did not surpass the rational inferences of well-informed persons.¹ Precise dates, such as those of the declaration and of the end of hostilities, were never given. Even the predictions of particular events were not satisfactory (although Mrs King foresaw the sinking of the *Lusitania*). Finally, the numerous predictions of a reign of perpetual peace after the war were hackneyed, and have not been justified.

In France, there have been individual cases of interest, analogous to the Saurel case, but hardly any general prophecies. Must we conclude that the collective future cannot be foreseen? Professional and amateur clairvoyants usually use their faculties in relation to individuals; it is not at all surprising that they are only interested in the individual. But we believe that the clairvoyant faculty is of wonderful variety and plasticity. Let us hope that some experimenters will train their subjects in a new technique.

Professor Hans Bender, director of the Parapsychology Institute at Fribourg-en-Brisgau, made a large-scale enquiry into psychic occurrences in relation to the events of the war in Germany.² A high proportion of the cases were precognitive, usually in the form of dreams. They were supported by proof in the form of statements to witnesses, or documents. Naturally there were many premonitions of death which were fulfilled, as well as many accurate predictions of the end of the war. But none of these cases was of a general character. Collective events were only reflected in individual destinies.

160 *Long-term Previsions*

People sometimes quote cases of predictions made by gypsies on inspecting the palm of the hand, which summarize a person's entire life including its ending. Such predictions should not be despised; many of them are fulfilled. But in general long-term predictions are rare. Price published in 1936 the account of a reading given by Mlle Jeanne Laplace at Paris concerning Professor Tillyard of London. The subject announced that his career would come to a

¹ G. Piddington, 'Forecasts in scripts concerning the War', *Proc.*, Vol. 33, Part 87.

² *Tomorrow*, Vol. 4, No. 2, 1936, New York.

tragic end 'in a country of sun and insects' as a result of a car or train accident in a few years' time. Tillyard, who had obtained an appointment in Australia, died in 1937 of a car accident between Canberra and Sydney, nine years after the prediction.¹

Osty reviewed a number of cases of prediction, duly attested, which were under his own observation and which ranged from two months in interval to more than ten years.² When he was mobilized in the First War, he consulted a clairvoyant called Mme Loni Feignez, who told him in detail what his first destination would be. She described meticulously the field-hospital in the rear to which he would be posted, which was quite unknown to him. It was at a market-town in Meurthe-et-Moselle.

In 1921 Osty was living in the provinces and decided to take up quarters in Paris. He asked Mme Peyroutet to describe to him the rooms he would occupy. He had one in mind in the rue de Longchamp. The clairvoyant told him that all his plans would be changed, and he would live in a small house near the Bois de Boulogne, which she described fairly well. The name of the road began with B (it was, in fact, the rue de Boulainvilliers). It was completely by chance that Osty rented this house a month later.

Here is a prevision three years ahead, again by Mme Peyroutet. It dated from 1922 and was repeated many times in various forms: 'The death of a man of science by accident . . . a fall, two deaths . . . like a ship . . . abroad . . . upsetting your life'. The death in question was that of Osty's predecessor at the Metapsychic Institute, who was killed at Warsaw in an aeroplane crash in 1924. Another case in which the time interval was six years concerned a person from Nevers who consulted Mlle de Berly in 1916. The subject saw an illness affecting the sight which would be cured, but would cause much nose-blowing and weeping. It was a cataract, removed in 1922, which caused an interminable flow of tears for a month. There was also the case of the Countess de Noailles, who showed Mme Fraya in 1913 the handwriting of one of her friends and received the information that he would die of a wound from a fire-arm in his thigh. The gentleman in question actually died in 1923 in a hunting accident.

Osty reports the remarkable case, quoted by Richet, of the Minister of War Berteaux, who was told in 1874 that he would be

¹ Harry Price, *Confessions of a Ghost-Hunter*, Putnam, London, 1936, p. 219.

² *Revue Métapsychique*, 6, 1936.

'rich and honoured, but he would die as general-in-chief, crushed by a flying chariot'. The fatal accident occurred thirty-seven years later, on May 21, 1911.

161 *The Prophecies of Nostradamus*

Cases concerning individuals cannot be taken to justify prophecies of a general type which announce very distant events. Those of Nostradamus are classic examples of this type. Michel de Nostredame published an almanac of predictions, under the title of *Centuries*, over a period of seventeen years, starting in 1550. It contained quatrains written in an obscure style, sometimes frankly absurd and incomprehensible, but which seemed to prophecy future events. Here is an example:

*Les exilés déportés dans les Isles
Au changement d'un plus cruel Monarque
Seront meurtris, et mis deux des scintilles
Qui de parler ne seront esté parques.*

M. Piobb, an occultist, made a long study of the quatrains, numbering about a thousand, and claimed to have discovered their secret. In fact, his method is extremely artificial. He begins by reconstructing the original text which, he says, was not in the vulgar tongue but in Latin. But this is not enough. It is also necessary to reconstruct the inversions, fusions of words and puns which the author used to veil his thoughts. Finally constant interpretations are made to make the prophecies agree with historical facts. Considering the arbitrariness of all these operations, we are led to conclude that this laborious *a posteriori* reconstruction is made in the interests of the cause, profiting by the obscurity and banality of a text which can be made to mean anything. There are thousands of millions of ways of rearranging 4,000 verses, and there are innumerable periods in history to which some of Nostradamus's verses indifferently apply.

Many other famous prophecies of this kind are open to the same criticism, apart from those which are frankly apocryphal like that of the Monk of Padua. The cases we have given of precognitive metagnomy have no analogy with these almanacs. They concern individual persons and do not require interpretation before they can be accepted.

162 *Warning Premonitions*

In the last part of this book we shall discuss the various hypotheses which can be made to explain precognition. In preparation for this discussion, and by way of antithesis to the duplicative premonitions we should mention the phenomena which Richet calls *tutelar premonitions*. In these we are dealing with events which are only partly realized, thanks to the knowledge which enables them to be recognized at the outset. Here the prevision seems to protect the person from a fatality. We must exclude, of course, all cases in which the warning premonition is completely fulfilled.

Consider, on the other hand, the case of a passenger who went to sleep on a boat moored at the mouth of a river and, during the night, dreamed that two fantastic figures were burning the mooring ropes; the boat began to drift, became caught in eddying water and began to sink. Awakened by the nightmare, the passenger threw open his door and went out on the bridge, where he saw that the mooring rope had just broken. But he repaired it, and there were no fatal consequences.¹ A psychic explanation of this is perhaps unnecessary. Subconscious perception of the breaking of the rope, with an accompanying jerk, could have set off the dream dramatization. The voices that clairvoyants hear at various critical moments of their lives are precognitive phenomena combined with prosopopesis. It is the same with presentiments, in which the event is too vaguely perceived to arrive at consciousness.

There are very few authentic cases in which detailed foreknowledge of an unhappy event has prevented it. In any case it is easy to explain why the precognition should have been partly inaccurate. In another case given by Myers² a lady dreamed with precise details that, on getting out of her carriage with her child, she saw the coachman fall from his seat, crushing his top-hat beneath him. Everything happened as in the dream until she saw her coachman losing consciousness. Then she called a policeman who arrived in time to catch him in his arms as he fell. One might think that the precognitive dream ceased at the point where the coachman fainted, and that the dream of the accident was a subconscious inference. We have many examples of falsification of paranormal knowledge by

¹ F. W. H. Myers, *The Subliminal Consciousness*, op. cit., *Proc. S.P.R.*, Vol. 7, Part 22.

² *Ibid.*, Part 29.

the subject's imagination. We have no right to conclude that at the time of the dream the event was to have been thus, and that conscious intervention modified it. There are numerous examples, on the other hand, in which the conscious will endeavours to evade a prophecy which is nevertheless realized. We may also add the cases, distinguished by Bozzano,¹ in which it seems that it is the premonition itself which produces the accident: attempting to avoid it, the persons concerned bring it about. In this state of uncertainty, we should give up the word *premonition* in speaking of precognitive phenomena.

¹ *Les phénomènes prémonitoires*, op. cit., p. 414.

PART THREE

PHYSIOLOGICAL PHENOMENA

CHAPTER VI

PSYCHIC FLUID

1. THE QUESTION OF HUMAN RADIATION

163 *The Renaissance of Animal Magnetism*

The essential problem of animal magnetism, as it was stated by Mesmer and his successors, reduces to this: is the organism of animals, and especially that of man, capable of emitting a form of energy analogous to the known physical forms (heat, light, electricity) and perceptible by other living organisms?

The accumulated experiments of a century and a half, the more recent of which have an incontestably scientific character, permit this problem to be resolved by limiting it on one side but extending it on the other, and relating it to new groups of facts. Before this new focus, which is due to the phenomena of materialization, the old conflict between the animists and the fluidists continued interminably. The former, who ascribed everything to 'imagination' were considerably fortified by the discovery of Braid. They thought they had made their point irrefutably, since the magnetizer and his fluid could be adequately replaced by a bottle-stopper. Besides, Fresnel's discovery that light consisted of the transmission of motion and not, as was thought before, of the displacement of a substance, struck a mortal blow at the fluid hypothesis.

The animists forgot that the same effects may be produced by different causes. We know now that hypnosis may be caused by various kinds of sensory stimulation; there is no reason why the magnetic fluid should not be a stimulant as well as a ray of light or an electrical discharge. We have also realized, even more recently, that the wave hypothesis does not explain all electrical phenomena. The discovery of the electron takes us back, more or less, to the Newtonian theory of emission. Here then is the idea of fluid reappearing at the heart of modern physics. Metapsychics is now justified in accepting the assertion of Durand de Gros and Boirac

that 'suggestion and mesmerism are two distinct influences, equally real, independent of one another, which can mutually supplement or oppose one another, and which can combine to produce common effects'. The existence of psychic fluid, suggested by tactile metagnomy, finds experimental justification in teleplasty.

164 *Reichenbach's 'Od'*

Before we discuss this justification, it is as well to deal with a series of experiments, developed from nebulous ideas of Mesmer's on the universal fluid, which were intended to establish the existence of a human physiological radiation, both visible and photographable. Between 1845 and 1868 the Austrian chemist Reichenbach published eight books¹ demonstrating the existence of the 'od', a natural energy associated with all matter, both animate and inanimate, and pervading the entire universe. His evidence for this depended on the concordant statements of a number of 'sensitives', that is, persons whose senses were sharper than the average. He believed that he had avoided the dangers of suggestion by not hypnotizing them. He observed that these subjects saw gleams of light at the two poles of a magnet. These were in the form of flames of unequal length (the positive one a little shorter), mobile and varying in brightness, iridescent and finer and lighter in colour than ordinary fire. The light disappeared when the armature was put on (which closed the lines of force). An electro-magnet gave the same results, and had the advantage that the current could be switched on or off without the subject's knowledge, so that his statements could be verified without risk of suggestion. The magnetic flame could be concentrated at the focus of a lens, where it gave a red spot. The tactile sensation was very pleasant to the subject and was accompanied by an attraction.

Crystals produced similar effects to those of small magnets, especially at the ends of their axes. One of the poles seemed to radiate warmth, and the other coldness. The light was bluish with reddish lines. 'Crystalline energy' stimulated animal nerves, attracted the hands of certain subjects, could be accumulated on other bodies by contact and traverse matter like electricity, but it had no affinity with the energy of magnets. Finally Reichenbach

¹ Reichenbach, *Physikalische-physiologische Untersuchungen*, Braunschweig, 1845; *Der sensitive Mensch und seine Verhaltung zum Od*, Stuttgart, 1855; *Aphorismen über Sensitivität und Od*, Vienna, 1867.

discovered that sensitives could receive an impression from a human hand similar to those from magnets and crystals; they saw emanations coming from the fingers. Passes made at a distance along the body of a blindfolded subject were felt as 'a breeze usually cool, occasionally warm'. On touching a brass wire of which the subject was holding the other end, he had a sensation of warmth. He recognized at a touch the taste and smell of a liquid 'magnetized' by the influence of a hand. The energy of hands was also capable of propagation and accumulation.

Reichenbach's experiments, treated with contempt by the scientific world, in spite of Berzelius's patronage, were resumed in 1880 by Dr Baréty, working with a young hysteric girl. He claimed to have demonstrated 'a special force of the human body, popularly known as animal magnetism'.¹ He called it 'neural radiant energy' and observed that it radiated from three places: the eyes, the fingers and the mouth. In the first two cases it induced anaesthesia and sleep, in the third it produced hyperaesthesia. It was propagated in a straight line, was reflected and refracted, and different bodies conducted it with various speeds. Thus it passed through a wall 80 cm. thick or crossed an empty space 5 metres 40 cm. wide in half a minute, or was transmitted along 17 metres of string in the same time. It was stored in water and certain metals. Water mesmerized by the force from the fingers produced contraction of the neck muscles and sleep. Unfortunately none of these results were repeatable with other subjects.

165 *The Fluid of de Rochas*

In 1891, Colonel de Rochas introduced Reichenbach's work into France and attempted to continue it.² In collaboration with Dr Luys, of the Hôpital de la Charité, he found subjects who perceived the emanations of magnets and the human body when they were hypnotized. The emanations from magnets were blue at the North pole and red at the South. The same colours were found at the positive and negative poles of a battery, respectively. The human body was also found to be polarized; the right half was a North pole, and the left half a South pole. With hysterics the blue turned violet, and it was scattered with black dots in nervous paralysis. But the

¹ A. Baréty, *Le magnétisme animal étudié sous le nom de force neuve rayonnante et circulante*, Doin, Paris, 1887.

² A. de Rochas, *Le fluide des magnétiseurs*, Carré, Paris, 1891.

subjects' statements varied with the experimenter and even 'from one moment to the next, either as a result of modification in the subject's hypnotic state or because of a different orientation of the emanating object'.¹ Rochas did not mention the possibility of mental suggestion by the experimenter.

In order to discover whether the sensation was purely subjective, he undertook a series of experiments with an electro-magnet which could be switched on, reversed, or switched off unknown to the subject. The description of the emanations always agreed with what had been done. When the soft iron was replaced by steel, the subject described permanent lights, as would be expected. When a spectroscope was used, the emanations of an average magnet could not be perceived; a powerful one had to be used. When the slit was illuminated with red light and a finger brought near, the emanation seen was violet, which indicated a mixture of red light with a blue radiation. The existence of the emanation was finally confirmed by means of a polarizer.

Rochas also observed that the emanation was perceived by the retina, that its colour varied with different subjects (red might be replaced by yellow or green) as did its intensity and length. The colouring did not depend on the magnetic nature of the poles, but on the direction of the current in the solenoid. Suggestion affected the description of the phenomenon to a certain extent. Rochas expressed no opinion on the nature of the emanation, or whether he considered it a wave or corpuscular emission.

In his communication to the Copenhagen Conference² W. Barrett said that he was convinced of the visibility of the magnetic field to certain persons, and he ascribed this to abnormal movements of the molecules in the air around the poles. Unfortunately he had only made a few tests with a clairvoyant subject, but he quoted the experiments at the laboratory at Amsterdam in 1907, in which 83 people took part (54 men and 29 women). Each of them was kept in the dark for 20 or 30 minutes, then the current of a strong electro-magnet was switched on or off. The subject registered his impression by pressing a button. 14 men and 13 women had no impression, 16 men and 4 women had irregular impressions unrelated to the magnetization, 7 men and 7 women had correct but irregular impressions, 11 men and 4 women had a continuous impression of

¹ 'L'exteriorisation de la sensibilité', op. cit., p. 9.

² 'Compte rendu du Congrès de Copenhague', op. cit.

light, and finally, 12 men and 1 woman gave correct indications. But we are not told if all the sources of error had been eliminated.

Lord Rayleigh and Hatfield tried to photograph the gleam of light from magnets with ultrasensitive panchromatic plates (1937). But even with an exposure of thirty days they obtained no impression.

166 *N Rays and the Aura*

In 1903 Professor Blondlot of Nancy announced the discovery of new physical radiations emitted by metals in a certain state of molecular equilibrium.¹ He called them N rays, calculated their wavelength and described their action on phosphorescent bodies. The N rays increased the luminosity of an insulated screen of calcium sulphide. This tendency to react easily, though uncertainly, was taken to explain the fact that N rays were found in small quantities everywhere. Magnets, chemical reactions and plants emitted them. Charpentier thought he had established that muscular and nervous activity also emitted the rays in abundance. But when his experiments were at once repeated in several laboratories, they failed, perhaps because the N rays were imaginary, as most of the scientific world thought.

Dr Kilner, a member of the London Royal College of Physicians, also revived Reichenbach's ideas when he published in 1912 the results of four years of experiments which he had carried out in hospitals, and which seemed to demonstrate the existence of the occultists' 'aura', or 'human atmosphere'.² Reichenbach's sensitives had seen it with the naked eye, but Kilner claimed that it could be made visible to anyone by using coloured screens. Assuming that very short wavelengths were in question, he looked for substances which would heighten retinal sensitivity to the violet and ultraviolet end of the spectrum. His choice fell on dicyanine which gives, in alcoholic solution, a beautiful violet blue. If someone was placed against a dark background in twilight, a slightly luminous mist, oval in form, was seen round his body. This had three distinct zones. The first was a dark edging, half a centimetre wide, surrounding the body; this was the 'etheric double'. Outside this was the interior aura, dense and streaked perpendicularly to the body; this was from

¹ *Comptes rendus de l'Académie des sciences*, 1904, *passim*.

² W. J. Kilner, *The Human Atmosphere, or the Aura Made Visible by the Aid of Chemical Screens*, Rehman, London, 1912.

three to eight centimetres in width. Finally came the exterior aura, which had no definite contour.

This phenomenon varied with the age, sex, mental abilities and health of the subject. Temporary rays or patches could be formed in the three layers by the exercise of will-power. The colour was usually bluish, tending to grey with less intelligent subjects. The reactions of the aura convinced Kilner that it was not a material vapour, but a radiation of energy. When the pole of a magnet was brought near, a temporary ray was formed, joining the pole to the nearest or most angular point of the body. However, the aura had no polarity of its own, which contradicted Reichenbach and Rochas. When the subject was charged with an electrostatic machine, the auras disappeared gradually and returned when the charge was dissipated. They could not be photographed. Kilner asserted that ninety-five per cent of people could see the aura, and he considered the phenomenon so objective and exact that he based upon it a system of medical diagnosis.

167 *The Part Played by Suggestion*

Physiologists as well as metapsychists have made well-founded criticisms of the experiments carried out since Reichenbach on human radiation. These criticisms usually conclude that illusion, suggestion or errors of interpretation were involved. Although there are certain persons who claim to see odic or auric lights (Maxwell was one, at least to the extent of seeing digital radiations), the majority see nothing. Even after having sensitized their retinæ with violet screens, psychical researchers like Rochas, Fontenay, and de Vesme, have not succeeded in seeing the aura. I have myself spent hours with Geley staring through dicyanine glass without seeing anything. It is true that we felt that with a little autosuggestion we should succeed perfectly in seeing a mist where there was probably none at all. But in any case, Kilner's statement about the proportion of people who can spontaneously perceive the aura is incorrect.

Reichenbach more prudently reserved this privilege to sensitives. But with these the suggestive and hallucinatory factor reappears. It dominates even more strongly Rochas's experiments with hypnotized subjects. All the results of this courageous and honest worker are vitiated by mental suggestion, which functions so powerfully in the state of *rapport*. The admission that he did not obtain constant

results, but that they varied with the hypnotic state of the subject and even with the orientation of the object, is sufficiently explicit. The subject perceived clairvoyantly the theoretical ideas of the experimenter as his own empirical observations. But careful research subsequent to all this work seems to have finally discredited any belief in the od or its successors.

168 *The Experiments of Haschek and Hofmann*

Haschek, a professor at the University of Vienna, studied first the threshold of perceptibility in a dark room of radiations from heated bodies and radioactive dust in clothing. He found no difference between normal persons and sensitives, except that the latter more quickly reached the maximal sensitivity, which normal people only reached at the end of twenty or thirty minutes. Then he found that crystals which had been kept for some months in darkness no longer gleamed. The gleam was restored by exposure to light, but they showed no polarity. The sensitives, who described real gleams of light with subjective qualifications (cold or warm light, reddish or bluish), could see no radiation from the poles of a powerful electromagnet. They saw one more or less distinctly around a horse-shoe magnet, but Haschek ascribed this to the slow oxidation of the red colouring which covered it.¹

As for the 'odic' gleam of the human body, Haschek established that it is not caused by slight phosphorescence of the clothes or skin, but by a slow oxidation of physical excretions. Washing with soap, indeed, caused it to disappear. The experimenter concluded that Reichenbach's observations were in part correct, but he rejected the hypothesis of the od.

In 1919 Hofmann continued Haschek's experiments.² The phosphorescence from crystals after insulation was confirmed. He humorously pointed out the effect of suggestion on what the sensitives saw. They saw nothing around certain mineral ores and objects which he had nevertheless exposed without their knowledge to ultra-violet light, but the sensitives declared that they lighted up when he brought his finger near them. He never obtained any results with magnets. Hofmann next proceeded to verify Kilner's observations. He made a series of colour filters and studied their effect on

¹ Haschek, 'Ueber die von Reichenbach beobachteten Lichterscheinungen', *Ac. des sc. de Vienne*, 123, 1914.

² A. Hofmann, *Die odische Lohe*, Baum, Pfullingen, 1920.

vision. He concluded from his rigorously detailed experiments that the aura was a completely subjective impression caused by fatigue of the retina and by a difference of accommodation for different colours. A decisive proof of this was given when after retinal 'sensitization' an aura could be seen round a plaster bust!

169 *Deceptive Photography*

Luys, who accepted with Rochas the reality of human emanations, attempted to photograph them. In order to do this, he placed his hand for twenty minutes on an unexposed plate immersed in a bath of developer. The image produced showed the print of the hand and a more or less extended halo round it which, according to him, was caused by human radiation. Working with hysterics he found that each of the hypnotic states — lethargy, catalepsy and somnambulism — had its characteristic radiations. The hand of an anaesthetic gave nothing.

This sensational communication, made in 1897 to the Biological Society and the Academy of Science, was sharply attacked by the physicists. Guebhart showed that the lines of force of the so-called radiations were only the result of a chemical reaction in the photographic process. They could be formed around inanimate objects by using turbid developing baths. Jacobsen more justly blamed the action of warmth. Yvon placed on sensitive plates a living hand and a dead hand, taken from a medical dissecting-room. Only the first produced a halo on the plate. Then the dead hand was heated to a constant temperature of 35° Centigrade, and this time a halo was produced as with the living one. Various devices were invented to eliminate the influence of heat, especially by MM. Chaigneau and Delanne. The hand could still be photographed through a glass plate and an adiathermous layer of alum, fifteen millimetres thick.

Other workers such as Darget and Baraduc obtained results with dry plates, pressing them against the hand or forehead. These were supposed to be 'photographs of thought' or of the 'vital fluid'. These results, with no scientific safeguards, were equally attacked by the specialists. Fontenay warned metapsychists against 'the deceptiveness of sensitive plates'.¹ He showed that bromide gelatine was affected by all sorts of physical and chemical agents besides light, and in particular by human sweat. G. Le Bon demonstrated

¹ G. de Fontenay, 'Le rôle de la plaque sensible dans l'étude des phénomènes psychiques', *Ann. des sc. psych.*, 1, 4, 11, 12, 1911 and 1, 1912.

that when the hand had been scrupulously cleaned it left no print on the plate. Finally, a decisive argument was that during the process of manufacture the plates were handled repeatedly, yet the Lumière firm certified that out of thousands of dozens of plates which had been developed, they had never seen anything attributable to this process.

170 *Magnetic Phenomena*

In the literature of animal magnetism there are cases of somnambulists who caused magnetized needles to deviate by bringing their hand near them. Professor Breslauer observed this with Slade in 1877 at Berlin. Fechner, Erdmann and finally Zöllner confirmed this later with the same subject.¹ In an experiment with two compasses, one large and one small, which were enclosed in glass spheres, Slade's hands, held by Zöllner and Weber, were placed flat on the table at a distance of thirty centimetres from the needles. These began to oscillate, the small one with great energy, to the point of beginning to rotate, and the other more slowly as if affected by a movement of the table. An unmagnetized knitting needle was then turned into a magnet when Slade had held it for a few moments under the table on a tray on which it was resting. His hands, of course, were under continuous control. A strong South pole was formed, but there was no North pole at the other end.²

Mlle Espérance, when very young, had drawn attention to her cleverness in affecting a magnetized needle, 'making it swing right round the dial, from North to South and from South to North'.³

Professor Murani and a laboratory assistant⁴ found that they could influence a galvanometer needle. When one of them brought his chest near it, this acted as a North pole, while his back acted as a South pole.

Sokolowski observed that Klouski could influence a compass. The needle could be displaced by passes thirty degrees towards the East. Three compasses were placed in line on a table and the subject, standing on a chair, held his right foot over them. The needles were violently displaced in the same sense, and that of

¹ T. Zollner, *Die transzendente Physik und die sogenannte Philosophie*, Stachmann, Leipzig, 1878-79, p. 41.

² Ibid., p. 48.

³ E. d'Espérance, *The Shadowland*, Redway, London, 1897.

⁴ Quoted in *Electricity*, June 17, 1897.

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² *Ibid.*, p. 48.

³ E. d'Espérance, *The Shadowland*, Redway, London, 1897.

⁴ Quoted in *Electricity*, June 17, 1897.

the last in the line swung right round the dial. Examination of the shoes and other control conditions demonstrated the genuineness of the phenomenon.¹

Grunewald carried out with many subjects a series of precise experiments with a ballistic mirror galvanometer which gave a deviation of one millimetre of the scale for a field of fourteen ten-thousands of a gauss.² Out of 100 subjects examined he found one who produced a transitory field, averaging five hundredths of a gauss, by approaching his hand. This field rose to a fifth of a gauss on one occasion. The exercise of will could increase or diminish it. The magnetic intensity was also related to the physiological state of the subject. In the morning, on awakening, it was very weak; it increased after meals and especially after defecation. It sometimes followed the rhythm of respiration. It was increased by mesmeric passes. It was decreased when the subject was at the same time producing telekinetic effects, which led the experimenter to think that physiological energy, the so-called 'vital force' and psychic energy were, if not the same thing, at least very closely related.

Grunewald found that not only the hand, but the whole body, possessed ferromagnetic properties. He even managed to obtain with iron filings a very remarkable magnetic map of the hand, showing lines of force radiating from fourteen distinct poles.

171 *Electrical Phenomena*

An electroscope registers the presence of an electric field. Now it has been discovered that certain subjects affect an electroscope without contact. In 1905, investigators at the Psychological Institute asked Eusapia to bring her fingers near a Curie electroscope; when they were 3 or 4 millimetres away from the edge of the platinum, the leaf fell quite rapidly. Branly was equally successful with a Geitel cylinder electroscope. The instrument was discharged by this means, but more slowly than if there had been contact. In 1907 Yourievitch obtained the discharge with a Branly electroscope at a distance of 5 or 6 centimetres. Eusapia said that she had to make an effort of will, and that she felt a tingling at the ends of her fingers.³ In 1908 Imoda ascertained⁴ that the discharge did not occur at once,

¹ *Revue Métapsychique*, 1922, p. 322.

² 'Compte rendu du Congrès de Copenhague', op. cit., p. 287.

³ J. Courtier, *Rapport sur les séances d'Eusapia Palladino à l'Institut général psychologique*, Paris, 1909.

⁴ *Ann. des sc. psych.*, 1908, p. 196.

but happened suddenly at the end of a certain time. He compared the phenomenon to the jerky discharge of electric fish.

As the electric charge on the gold leaves is neutralized, we must suppose that conduction takes place between the subject's finger and the electroscope. This conduction may take place by means of ionization of the air, or by the emission of a conducting fluid. Curie and Langevin observed no signs of ionization in the neighbourhood of the subject. It is therefore very probable that the discharge is caused by psychic fluid, either in a 'rigid' or a specialized form. Some of Ochorowicz's experiments with Stanislaw T. confirmed this hypothesis.¹ The subject succeeded in closing a galvanic current between two electrodes 4 millimetres apart.

In 1921 Yourievitch and Du Bourg de Bozas made a joint communication to the Copenhagen Conference on the electrical effects of the radiation from psychic subjects.² Yourievitch stated that it rendered gaseous and dielectric mediums conducting, and that it passed through metal screens with a greater power of penetration than that of the hardest X-rays and the gamma rays of radium: these were the so-called, 'Y rays'. Du Bourg placed the subject in an open electrical circuit which he succeeded in closing by extending his hand and concentrating his will. The same success was obtained when the subject was placed outside the circuit. The experimenter photographed a 'tube of fluidic force' emitted by the subject's hand through a sheet of lead five centimetres thick. This was a conduction tube between two copper plates at a potential difference of four volts. The galvanometer included in the circuit registered a current of six-tenths of an ampère. Du Bourg's 'fluid detector' consists of an open circuit connected to the local supply at 110 volts and including an ammeter and a rheostat. One of the terminals is connected to a copper grating on which the subject places his hand, and the other to a plate fixed opposite.³

Grunewald questioned the theory of an electrically conducting fluid.⁴ When he fastened a small aluminium plate to the needle of an electrometer, charged to 500 volts, and asked a subject, standing a short distance away, to tap the plate gently, he observed no abnormal loss of charge by the electrometer. On the other hand, the elec-

¹ J. Ochorowicz, *Les rayons rigides et les rayons X²*, *ibid.*, 4 to 12, 1910.

² 'Compte rendu', *op. cit.*

³ Du Bourg de Bozas, *Etude sur le fluide d'un médium à effets psychiques*, Terrier, Etampes, 1921.

⁴ 'Compte rendu du Congrès de Varsovie', *op. cit.*, p. 281.

trometer was quite rapidly discharged by the close approach of the subject's hand, from which the experimenter concluded that the discharge was caused by ionization of the air. But there is no necessity at all to assume ionization.

172 *Psycho-Galvanometry*

It appears that the psychic fluid, flowing along a conductor, can act like an electric current and set up a magnetic field. This is the interpretation that must be placed upon certain early experiments in which the subject was able to influence a galvanometer with which he was connected in circuit. An instrument of very high sensitivity is required for this type of experiment. In 1874 M. de Puyfontaine had an astatic galvanometer made by Ruhmkorff, with a coil containing eighty kilometres of silver wire. (Ordinary galvanometers rarely have more than 500 metres of copper wire.) With this apparatus Gasc-Desfossés and Courtier carried out a large number of experiments which tended to demonstrate the existence of currents of very variable intensity and direction, excited by the subject.¹

With an ordinary galvanometer, Ochorowicz observed that Stanisława T. could produce deviations of the needle varying from twenty to fifty degrees. The direction of the current was dependent on the subject's thought. Thus, when the connections were changed by means of a concealed commutator, the needle still deviated in the same direction because the subject was unaware of the inversion. On the other hand, by suggesting to her that the connections were changed without actually doing so, a deviation in the opposite direction was obtained. When the part of the metallic conductor which was held by the subject was replaced by a thread of silk, there was a deviation of only about ten degrees. Silk is an insulator for electricity, and this result seems to indicate that the psychic fluid is propagated in the same way as electricity and sets up a magnetic field in the galvanometer.

These experiments should be compared with the psycho-galvanometric method used in experimental psychology since the work of Veraguth,² which is used to give an objective indication of certain subjective phenomena, conscious or unconscious, and especially of emotions.³ The subject holds in his hands as before two electrodes

¹ Gasc-Desfossés, *Le Magnétisme vital*, Rudeval, Paris, 1897.

² O. Veraguth, *Das psychogalvanische Reflexphänomen*, Berlin, 1907.

³ Abramowski, 'Le subconscient normal', op. cit., 1918.

connected to a galvanometer, but a battery is included in the circuit. There is thus a permanent deviation of the needle which must be taken as zero. Various mental processes are induced in the subject, and the corresponding temporary deviations are measured. There are very marked individual differences which evidently indicate the variations of resistance in the physiological circuit. Abramowski asserted that intellectual effort alone produces no deviation, for which an emotional stimulus is required, but sub-conscious reactions produce the same effect as emotions. The psycho-galvanic technique has been applied to the study of telepathy.¹

173 *Photochemical Phenomena*

Although the photographic effect of 'human radiation' has been shown to be deceptive in most cases, it has been long known that genuine metapsychic subjects are capable of affecting sensitive plates through various obstacles. Without trespassing on the subject matter of the chapter on ideoplasty, it is convenient to mention here what appears to be a property of the psychic fluid, attributed by Ochorowicz to special radiations which he called X^* rays. These rays, discovered with the 'rigid rays' of Stanisława T., had a greater power of penetration than X-rays. The process of emission was as follows. The first stage was the appearance on the subject's hands of spots which were only visible on a photographic plate, where they looked like an agglomeration of points of light. At the second stage an emanation illuminated the space between the fingers. At the third stage the emanation left the skin and formed between the hands a luminous nucleus which finally developed into knots in the case of 'rigid rays', and into a geometrical sphere in the case of X^* rays. When an impression of the spheres was obtained by placing the hands above a plate enclosed in black paper or placed in a frame, it showed several layers surrounding a central nucleus, darker in colour and of irregular shape. These layers appeared to be in rotation.²

Ochorowicz ascertained that these rays passed through thick metal screens, and that although invisible, they were very actinic. Electric and magnetic fields appeared to have no effect on them. Their region of influence extended over several metres. They were

¹ 'Comptes rendus des Congrès de Copenhague et de Varsovie', op. cit.

² 'Les rayons rigides et les rayons X^* ', op. cit., *Ann. des Sc. psych.*, 1910.

closely related to conscious and subconscious thought, appearing thus to contradict the ordinary laws of physics. For example, Ochorowicz found that a plate enclosed in an iron frame, of which half was covered with lead foil, showed a clearer impression on the half which was under the additional screen. A greater expenditure of psychic energy had been necessary to overcome the obstacle. Repeating Darget's experiment with a printed paper laid on the gelatine, Ochorowicz obtained only a mist on the plate, without a trace of letters. He had the same result with two plates fastened together. The rays passed through glass in the same way as metals. However, when he placed a gold coin on a plate and enclosed both in an envelope on which he signed his name, he found that the rays passed through the coin and reproduced the signature and the shadow of the subject's fingers. This was yet another proof that the unknown energy could not be considered a blind force. In addition, Ochorowicz obtained a large number of experimental 'radiographies' especially radiographies of hands, with various characteristics which clearly showed the influence of ideoplasty (226).

174 *Mechanical Phenomena.*

The mechanical phenomena which are produced by genuine mediums, as has been abundantly demonstrated, form part of the phenomena of telekinesis. But at the time of animal magnetism they were believed to be a property of the fluid emitted by every individual. Hence the invention of small apparatuses designed to reveal its presence, such as the abbé Fortin's *magnetometer*, Joire's *sthenometer*, Baraduc's *biometer* and Tromelin's *fluid motor*. The apparatus consists of a light, mobile carriage mounted on a vertical axis, which is made to turn by the approach of a hand or the body. The rotation may be through a certain angle in either direction, or may even take the form of continuous gyration. The immediate objection to this was that the heat of the hand produced slight currents of air which were sufficient to cause a rotation, even a rapid one. This objection was answered by ingenious devices. However, placing the mechanism under a glass bell did not eliminate the action of heat. Geoffriault's experiments with an apparatus with paddles seemed to show that the effect was produced only by living bodies.¹ Inanimate objects acquired the power to act in this way

¹ *Ann. des sc. psych.*, 1901, p. 341.

when touched by the hand. It is true that the same occurred with material that had been exposed to the sun. Archat and Warcollier demonstrated by independent experiments that the action of heat is a sufficient explanation of the phenomenon.¹

Joire attempted to use the sthenometer as an aid to medicine.² He found that the deviation of the needle varied with different illnesses; for example, the paralysed side of hemiplegics gave a deviation three or four times as great as that given by the normal side. Accepting that the psychic faculty can occur in varying degree, we may relate these facts to certain facts of telekinesis and regard these apparatuses as very sensitive detectors of the psychic fluid, or of Ochorowicz's 'rigid rays'. One might also suggest that the phenomenon is due to the electricity of the human body.

175 *Muller's Experiments*

M. E. K. Muller, a Zurich engineer, was led by his study of the electrical resistance of the human body, which he was making in order to reduce the number of accidents in industrial electro-technology, to results which seemed to show the existence of a human radiation to which Professor Farny gave the name of *anthropoflux*. He first found that conductivity was considerably reduced in illness and in the hypnotic state. Then he observed that when a finger was brought near a small air condenser connected to the positive pole of a forty-volt battery, a current was permitted to pass with a greater or lesser degree of constancy and strength. This phenomenon is similar to that of the alternating tension in a Ruhmkorff coil, even if a thin layer of mica is placed between the finger and the condenser. Muller found other electrical methods for demonstrating this phenomenon.

The fluid is transmitted particularly from the tips of the fingers, and occurs also in the breath. Its occurrence depends on the state of the nervous system as well as on atmospheric conditions. It diffuses upwards and can be made to circulate in an ebonite tube. It passes through thin layers of many kinds of materials. It can be stored in certain substances for a few minutes. It ionizes air and increases electrical conductivity of insulators. Every precaution appears to have been taken in these experiments to eliminate misleading influences, especially that of bodily heat.

¹ Ibid., 1908, p. 198.

² Ibid., 1904, p. 242, and 1906, p. 752.

It is not irrelevant to observe that physical mediums or teleplasts say that they experience tingling at the ends of their fingers when the phenomena begin. We would mention the experiment made in 1905 at the General Psychological Institute with Eusapia Palladino, under the direction of Professor d'Arsonval. A Curie electroscope was charged with an ebonite plate and Courtier asked the medium to bring her fingers near the apparatus without touching it. At a distance of three or four millimetres, the leaf of the electroscope was slowly discharged. This experiment was repeated several times, notably in the presence of Branly.¹

Similar experiments were carried out by Ochorowicz with Stanislaw T. He ascribed the conduction of electricity not to ionization of the air, but to condensation of the unknown fluid in 'rigid rays'. The electrical resistance of the subject was greatly reduced.²

II. PSYCHO-PHYSIOLOGICAL PROPERTIES

176 *Boirac's Experiments*

Having studied the physical properties ascribed to the psychic fluid, it remains for us to answer the question put by Laurent de Jussieu as a result of his experiments with somnambulists: Is there a 'fluid or medium which is conveyed from one man to another, producing a perceptible effect'? The experiments on human radiation seem to us often unconvincing, on account of the effect of suggestion. But there have been more recent ones carried out by Boirac, Alrutz, and Grunewald, which deserve careful examination. They are a continuation of the experiments of Jussieu.

Jussieu's subjects described a sensation like a light breeze, sometimes warm and sometimes cold, which followed the investigator's finger when he moved it over their body at a distance of about an inch. The sensation was similar but more intense when the same thing was done without the subject's knowledge, for example on his back. Gurney verified these observations. Boirac resumed the experiments in 1892 with hypnotic subjects. He had only to bring his open hand near their backs in order to attract them irresistibly towards it. He produced jerks in their limbs and other parts of their bodies. When he extended his hand towards the feet of a young

¹ 'Rapport sur les séances d'Eusapia P.', op. cit.

² 'Les rayons rigides et les rayons X²', op. cit.

subject who was sleeping naturally, he saw the feet rise in response to the gesture of his hand, and this happened three times. The rising could be produced by a glance. At other séances he observed that his right hand produced an attraction and his left hand produced tingling. When the two hands were held together their separate effects were combined. Their influence was transmitted along a copper wire. Boirac was aware of all the dangers of suggestion and took ingenious precautions to eliminate them. His control experiments showed him that human magnetism can not only produce effects independently of suggestion, but that it can in certain cases oppose it and neutralize its effects.

He considered the following experiments of fundamental importance from this point of view. The subject's eyes are blindfolded and he is asked to say where he feels a touch. The experimenter points his hand at a part of the subject's body, at a distance of five or ten centimetres. At the same time an assistant touches points all over the subject's body. Boirac found that all the touches were described, except for those which fell within the region at which the experimenter was pointing. With another experimenter, who 'lacked fluid', the subject described all the touches. But if the active experimenter then took the hand of the neutral experimenter, the part of the body at which the latter was pointing became anaesthetic at the end of between thirty and sixty seconds. Boirac concluded that there was an influence emitted by certain organisms which he called 'radiating-conductors' capable of acting upon certain others, which he called 'non-radiating-insulators', and capable of propagating itself through the organism of a third class of individuals, the 'non-radiating-conductors'. He also recognized a fourth class, the 'radiating-insulators', which included subjects who produce physical phenomena.

This classification emphasizes the analogy between the psychic fluid (at least in its physiological effects) and electric current. Boirac completed his theory with various hypotheses about conductivity, and postulated the unity of the psychic fluid.

In hypnotism and suggestion, he suggested, the fluid remains enclosed in the organism; in animal magnetism it is conveyed from one organism to another; and finally, in materialization phenomena, it is completely externalized. Thus psychic faculty varies only in degree and Boirac claimed that it could be artificially induced by associating a magnetizer (radiating-conductor) with a subject

(insulator).¹ The experiments which he suggested should be attempted one day.

177 *The Experiments of Alrutz*

Alrutz, a Swedish professor, also carried out researches to ascertain if 'one nervous system can exert a direct influence upon another'. His work was done with subjects in a state of light hypnosis (which is always a possible source of error). These subjects were seated in an armchair, their heads covered with a veil and their ears stopped with wax, so that they could neither hear nor see. Their arms rested in a horizontal position on a long box of which the upper surface consisted of a sheet of glass, five millimetres in thickness. Descending or centrifugal passes produced complete anaesthesia of the forearm and arm. The same result was produced through metal screens. When wool or cardboard was used, little or no result was obtained. If a strip of woollen material was laid along the sheet of glass, it seemed to diminish the subject's sensitivity and no anaesthesia was produced in the part which it shielded. These results were not constant, which Alrutz attributed to variation in the hypnotic state, and to a decrease in the specific or general sensitivity of the subject.

Ascending passes restored sensitivity with a sense of discomfort. If the subject had been pricked with a needle during the period of anaesthesia, it was at this time that he felt the prick. When a hand was held over part of the subject's body it produced tingling or smarting if he was in a light trance, while if he was in the lethargic state sensitivity returned to the parts indicated. Alrutz also obtained changes in the power of movement by means of passes, and other experimenters obtained the same results with the subjects they had trained.² We have already repeatedly referred to the dangers of subconscious suggestion and hypnotic training. For these reasons, the results obtained are of little value as indications of the effects produced by passes, but they seem to give some support to the idea of a magnetic force.

178 *Effects on Animals and Plants*

The early magnetizers, who had carried out repeatedly experiments

¹ E. Boirac, *La psychologie inconnue*, Alcan, Paris, 1908; *L'avenir des sciences psychiques*, Alcan, Paris, 1916.

² S. Alrutz, *Une nouvelle espèce de rayonnement de l'organisme humain*, Arch. de neurologie et psychiatrie, Zurich, 1922.

like those of Boirac and Alritz, and many others of interest, asserted that the magnetic fluid could act on animals and plants. The celebrated Lafontaine magnetized dogs and lions and made them insensible to pricks and blows. As this was done in their presence it may be explained simply by Braidism. But the magnetizers also made their fluid act on plants. Lafontaine magnetized a geranium which died and then returned to life with a vigour surpassing that of a neighbouring geranium. Lafontaine's geranium was the first of the two to flower. Charpignon records an experiment carried out by his colleague Picard¹ on six rose tree grafts, one of which was magnetized for five minutes morning and evening, starting on April 5th. Five days after the grafting, the selected one had already developed two shoots a centimetre in length, while the others had hardly begun to grow. This advance was maintained. On May 20th it gave a first flowering of ten fine roses, and eight in a second flowering. It entered its third flowering, while the neighbouring rose trees produced only half as much growth and did not flower until the end of June. Dr Picard also magnetized a branch of a peach tree bearing three fruits. This branch developed much more than the others and the peaches it bore were much above the average in size and ripened faster.

It may be thought that this early experiment was not carried out under sufficiently scientific conditions, but it is not an isolated case and there are recent examples which were carried out under good control conditions, such as those of M. Louis Favre, who showed an acceleration in the rate of growth of garden-cresses under the influence of magnetization.²

More recently, Dr and Mme Paul Vasse tried to influence the growth of germinating seed by concentrating their will-power on the place where it was sown for a quarter of an hour every day.³ Only one of them obtained positive results — a definite difference in growth between the selected seed and the rest. Other experimenters who claimed powers of this kind were unsuccessful. These experiments do not seem conclusive.

179 *Mummifying Fluid and Curative Fluid*

Drs Clarac and Llaguet of Bordeaux observed that a woman had the strange gift of being able to mummify living tissues by holding

¹ 'Physiologie, médecine et métaphysique du magnétisme animal', op. cit., p. 52.

² *Bulletin de l'Institut général psychologique*, 1904, p. 282 and 1905, p. 135.

³ *Revue Métapsychique*, 2, 1948.

her hands over them without touching them.¹ The séances were about fifteen or twenty minutes long. The experimenters also observed the following phenomena: desiccation of flowers with preservation of the colours and without separation from the stalk; halting of the fermentation of wine, neighbouring samples of which degenerated in 3 days; drying up of shellfish in 13 days; preservation of fish and birds with their natural colours, etc. Animal organs normally subject to putrescence, in particular the spleen and liver, dried odourlessly. Some rabbit's blood remained bright for 21 days and then dried; microscopic examination showed that the corpuscles were intact. The putrefaction of a canary was immediately arrested and the corpse mummified in 5 days.

Geley verified these experiments. He observed that even without evisceration rather fat animals were preserved as well as if they had been stuffed. Microbes and other parasites were destroyed. Geley correctly thought that the 'fluidic' action of the subject had an indirect microbicidal effect which depended on reinforcement of the resistance of the tissues. He also related this phenomenon to psychic healing.

The primary aim of Mesmerism was to cure illnesses, and accounts of magnetic treatments are numerous in the early records. We cannot call in question so many testimonies, many from distinguished doctors, but it is impossible to separate the mental effect of suggestion from the physical effect of the passes. Since the experiments to which we have just referred prove that it is possible for someone to modify dead tissues by increasing their cellular resistance, we can accept that it may be possible to act on living tissues in the same way. 'Magnetic fluid,' said Charpignon, 'like all other fluids is dynamic. It is the vital force. When it accumulates in the nervous system the powers of vitality are increased.'² Liébeault, the originator of the theory of suggestion, was led by his experiments with young children to recognize that one person can beneficially affect another, independently of suggestion. Bernheim's criticisms of these experiments are not convincing.

180 *Healers*

We shall refrain from entering here into a subject so liable to charlatanism as that of healing by fluid or other paranormal means.

¹ *Les radiations humaines*, Gounouilh, Bordeaux, 1921.

² 'Physiologie, médecine et métaphysique du magnétisme animal', op. cit., p. 174.

Dr Kat of Amsterdam, reporting to the Utrecht Conference, declared that at the present time healers constitute a real social danger, and he asked for the establishment of a centre for medical verification.¹

At the same Conference Dr Louis Rose, a psychiatrist, described the researches which he had carried out in London at the invitation of the S.P.R. He stated that he 'had been unable to find a single case in which a genuine organic disease had been cured or even improved when normal medical examinations had failed after reasonable attempts'.² This observation agrees with those of specialists of all nationalities. One of the greatest of them, Pierre Janet, summed up in the three volumes of his admirable work '*Médications psychologiques*',³ all the knowledge of mental illnesses acquired by modern therapeutics. In this he continued the work of the Salpêtrière school begun by Charcot, the advocate of 'healing faith'.

In 1954 the Parapsychology Foundation of New York arranged a conference at Saint-Paul-de-Vence to study the problems of spiritual healing. A paper by Dr Thouless cautiously suggested that there may be some cases of healing which are not caused by suggestion. He proposed that the exploits of healers should be submitted to control experiments in hospitals, which would no doubt raise some difficulties, in view of the known facts of psychotherapy.

III. FROM FLUID TO ECTOPLASM

181 *The Phenomena of Materialization*

In the chapter on telergy we shall give an account of a long series of experiments which have established the reality of metapsychic materializations. In the trance state certain individuals can extract from their own bodies, and probably also from the bodies of nearby people, an unknown substance under the control of the subconscious mind, capable of imitating all forms of life and of inanimate matter, and of carrying out the greatest variety of mechanical, physical or chemical actions. We shall assume that this substance is always the same and we shall relate it to the 'psychic fluid' we have just studied.

It is important to make our postulate precise. Certain authors, Geley in particular, have postulated the unity of this substance for reasons which were metaphysical rather than experimental. Observing that it comes from the subject's body, they assert that it

¹ Paper No. 51.

² Paper No. 47.

³ Alcan, Paris, 1919.

is the fundamental organic substance, the basis of all forms of life, and they draw from this biological conclusions which we shall discuss later. We, on the other hand, postulate the unity of the psychic fluid *for the sake of economy of hypothesis*, and because there is no experimental evidence which invalidates this.

However, Crawford formulated two dualistic hypotheses.¹ First, he thinks that in order to act on ordinary matter, the invisible fluid, which he calls substance X, transforms itself into a visible substance. But this would not be a true dualism, since the two substances would be convertible into one another 'like water and ice', as he said. There is a more obvious dualism in another hypothesis according to which, in order to achieve kinetic effects, the substance emitted by the subject has to acquire energy, which is borrowed from those present. Hence the advantage of having a fairly large number of sitters at physical séances.

These theories will seem strange, not only in themselves, but in relation to modern theories of matter and energy. Experiments have forced us to admit, on the one hand, that matter can liberate energy by dissociation of its atomic elements, and on the other, that some forms of energy, if not all, possess the properties of matter: mass or inertia, weight or obedience to gravity, and structure or form located in space. The work of Einstein and Planck has enabled physicists to generalize the hypothesis of materialization and to eliminate or at least weaken the traditional dualism which was one of the great difficulties of scientific philosophy. It was not understood how a substance, supposed to be weightless and unlocalized like energy, could act on matter; and Ostwald's theory, according to which all reality is energy, was not intellectually satisfying. The discovery of properties common to the two apparent constituents of the sensible world allows us today to understand their interaction.

This is very valuable to psychic theory and validates the hypothesis of psychic fluid, which is matter and also energy. In the form of energy it is Crookes's 'psychic force'. In the form of matter it is Richet's 'ectoplasm'. We do not yet understand its physiological or physical nature. We can only recognize its extraordinary polymorphism, and the ease with which it immediately imitates the most complicated material structures. Its properties in this respect are not comparable to those of any physical substance, but are like those of

¹ W. J. Crawford, *La mécanique psychique*, Payot, Paris, 1923, p. 169.

a living substance almost released from the laws of physiology and directly organized by the mind.

182 *Nebulous Fluid*

In the first stage of materialization, the fluid is invisible to the normal eye. Sensitives and clairvoyants claim that they can see it. Some materialization experiments carried out by Grunewald with the assistance of a sensitive showed perfect agreement between the statements of the latter and the automatic indications of the balances which registered the development of the phenomena.¹ But it is difficult to decide whether it is a question of great visual acuity or of clairvoyance. In the first case, the radiations emitted by the fluid, supposing it to be luminous, must be of a wave-length too great or too small for the normal visual range. We must take the second explanation into account, especially when we are dealing with sensitives. However, we must not reject certain photographs of 'phantoms' obtained under satisfactory conditions, although the interpretation of the phenomenon may be two-fold.

Crawford observed the existence of structures which were invisible in strong red light. When the hand was passed through them, an unpleasant sensation of cold was felt and the structure was destroyed. Sometimes the materialization was of greater density but remained invisible.

Usually, in ectoplasmic séances, nebulosities are observed, more or less mobile and luminous, from which the forms emerge. Crookes saw in good light 'a luminous cloud hover over a heliotrope placed on a table beside him, break off a stem and carry it to a lady'. Russel Wallace saw a whitish mist appear beside Monck, separate into white flakes which moved about in the air, and finally condense into a structure. This structure may remain undifferentiated, for example in telekinesis; it then possesses considerable elasticity and gives the impression of a cushion of air. Crawford stressed the typical characteristic of levitated tables, which seem to dance as if on the surface of waves. Home and Eusapia produced analogous phenomena.

Rochas saw a luminous mist coming from the chest of Mme d'Espérance. We have ourselves seen a sort of luminous breast-plate form on the chest of Stanislaw T. Home's hand, or the top of his head, sometimes became phosphorescent as if vapour was emerging.

¹ 'Physikalisch-mediumistische Untersuchungen', op. cit., 1910.

Similarly, we have seen something like smoke coming from Gouzyk's head. Dark fluid formations like Chinese shadows were very common with Eusapia and Willy. In conclusion, all teleplasts produce very bright and mobile luminosities, varying in volume from a point to the size of a five-franc piece. Geley, who studied them carefully with Klouski, regards them as 'focuses of condensation for the nebulous emanation from the medium'.¹

We recall that Osty's experiments demonstrated, by the use of infra-red rays, the presence of ectoplasm in the invisible stage. In this state it absorbed up to seventy-five per cent of the radiation, which at strong intensity is harmful to it. The absorption was rhythmic and corresponded with the respiratory rhythm of the subject, which was enormously accelerated.²

183 *Pasty Type*

The condensation of psychic fluid happens in various ways which fall into two well-defined categories. The first is characteristic of the early mediums, from Home to Eusapia; this is the *nebulous* type. The substance appears in the form of a mist, luminous or otherwise, and passes without transition to an organized state. This is in agreement with Crookes's observation: 'A luminous cloud seems to form around an object. Then it becomes concentrated, takes on a shape and changes into a perfectly-formed hand of which the flesh seems as human as that of the people present. At the wrist and arm it becomes misty and is lost in a luminous cloud'. The dematerialization occurs in the same way and can be observed by the sense of touch. When one has been able to hold one of these shapes in one's hand, one feels it melting and vanishing.³

Eva gave materializations of the nebulous type, conforming to the general tradition, until the day when, no doubt as a result of ideoplasty, she created a new type which was not nebulous, but *pasty*. This type has since been copied by various mediums, so much so that it has been taken by the uninitiated and even by certain psychical researchers as the typical form of ectoplasm. It was particularly well described by Schrenck-Notzing and Mme Bisson, and later by Geley. 'The substance,' said this last,⁴ 'separates itself

¹ *L'ectoplasmie et la clairvoyance*, op. cit., 1924, p. 230.

² *Revue Métapsychique*, 6, 1933.

³ W. Crookes, *Recherches sur les phénomènes du spiritualisme*, trans. Alidel, Paris (no date).

⁴ *L'ectoplasmie et la clairvoyance*, op. cit.

from the medium's body at any point, but especially from the mouth and the natural orifices, as well as the points of the breasts and the fingers. It occurs in various forms; sometimes, most characteristically, as a malleable paste, a real protoplasmic mass; sometimes as numerous fine threads; sometimes as straight and rigid strands of various thicknesses; sometimes as a wide flat band; sometimes as a film; sometimes as a kind of thin cloth with vague and irregular edges. The strangest form it takes is that of fully-extended membrane with fringes and pads, which bears a general resemblance to the epiploon.¹ Usually emerging from the mouth, it may take up a large volume and cover the whole body like a cloak (Eva, Nielsen). It is white or grey in colour. The texture is also subject to infinite variation, sometimes soft and elastic, sometimes hard or fibrous. Many observers have had the impression, in a less advanced stage, of a spider's web. Crawford and Geley described a tactile impression which was 'cold, clammy, reptilian'. Ectoplasm is very lively in movement, appearing and disappearing instantaneously, for example in response to a contact with a solid object or exposure to light.

184 *The Source of Ectoplasm*

With nebulous ectoplasm it is difficult to determine the source, as it usually emerges in an invisible state and condenses at a distance from the medium. It is probable that structures produced at a distance remain connected to the medium's body by a more or less dense cord which has been compared with the umbilical cord.

In the case of pasty ectoplasm, the absence of the invisible stage has made it possible to obtain more information about the process of exteriorization. With Eva the ectoplasm emerged from all parts of the body, but chiefly from the natural orifices, the top of the head, the tips of the fingers or breasts, and the armpits. Usually it emerged from the mouth with vomiting movements, which led the uninitiated to believe that a fraudulent regurgitation was involved. Mme Bisson and Schrenck-Notzing refuted this allegation without difficulty, either by the administration of a colouring substance (bilberry preserve) just before the séance, or by a medical examination of the medium.¹ The best demonstration was provided by the substance exuding from another part of the body.

In an attempt to detect teleplastic frauds, the materialized sub-

¹ J. Bisson, *Le médiumnisme et la Sorbonne*, Alcan, Paris, 1923.

stance has sometimes been marked with lamp black or a colouring powder. Usually the medium's body has been found after the séance to be marked with the powder (Gibier). Crawford's experiments established that when ectoplasm re-enters the body, it deposits any impurity it may have picked up. He first observed, while obtaining prints at a distance in clay by means of materializations, that these prints showed clearly the weave of Miss G.'s stocking, and that after the séance traces of clay were found on the medium's shoes and stockings (later her feet were even fastened in a kind of pillory). As she was bound to her chair, and in any case the red light allowed her movements to be watched, he concluded from this that the psychic structure emerged from her foot, materializing as soon as it made contact with the stocking, of which it retained the impression, and that it returned to the body by the same path, leaving behind the impurities it carried. Among these impurities an examination with a magnifying-glass revealed fine particles of mud such as would come from friction with the floor and the medium's shoes.

Additional proof was given by an examination of the clay surface; threads from the stockings and shoe-lace were found there, as well as fragments of wool from the tongue of the medium's shoe.¹

Then Crawford used the coloured-powder method to find the source of the ectoplasm. By placing the powder where the ectoplasm is expected to emerge its track can, so to speak, be followed. Crawford used methylene blue, carmine, and as an olfactory indicator, eucalyptus oil. The results were as follows. The ectoplasm did not originate at the feet; it emerged from the genital organs, came down the legs underneath the stockings and entered the shoes. But it is possible that the feet also contributed to the emission of ectoplasm.

185 *Dematerialization of the Medium*

Since the psychic fluid is a ponderable substance, its temporary absence from the medium's body must cause a loss of weight. This suggests two questions. Is the materialization exactly equal to the dematerialization of the medium, and at the expense of which parts of the body does this dematerialization take place?

The first precise experiments were made by Crawford, who is the Lavoisier of teleplasty. But observations had already been made with certain remarkable mediums. In 1874 Colonel Olcott had even

¹ W. J. Crawford, 'La mécanique psychique', op. cit., p. 196.

made a materialized figure step on to a weighing-machine, which indicated weights of 77, 59 and 52 pounds in the course of the same séance, while the medium's weight was 121 pounds.

In 1893 Aksakof observed the partial dematerialization of Mme d'Espérance. The séance took place in red light, and he was only separated from her by a curtain. When the materialized figure appeared he put his arm through the curtain and ascertained, by sliding his hand along the back of her armchair, that the medium was not there. At the moment of disappearance of the apparition a hand fell on his own, which was resting on the arm of the chair. The hypothesis of fraud is excluded, because the phantom was clothed in flowing white garments and had bare arms and feet, while the medium was wearing a red dress with tight sleeves. Aksakof gives a faithful account of this case, as he does of a similar one which is more precise and supported by many witnesses. Sitters who felt the medium's body while a materialization was occurring observed that *only the upper part of her body was in the chair; her legs were missing and her dress fell flat along the seat of the chair.*¹

Geley observed this phenomenon with another medium. Theoretically, it is possible that the dematerialization affects non-vital parts of the body, or perhaps that it draws uniformly on the muscular tissues. This would explain the reports of certain observers who claim to have seen the medium's body become translucent.

186 *The Use of Scales*

In one of his experiments Crawford placed his hand low down Miss Goligher's back and felt the flesh softening and giving way. When the ectoplasm returned the flesh resumed its normal volume and firmness. When the medium's thighs were connected to a dynamometer, he found that during the emission the tension gradually decreased from 1,800 to 450 grams.² Besides this, in the course of his researches into the mechanics of table-lifting, he had asked that the psychic matter should be taken from the medium's body. The latter, who was on a weighing machine, regularly lost weight. The loss, corresponding to the weight of the levitating structures, was at first about 7 kilograms, out of a total weight of 62 kilograms. When he asked the 'invisible operators' to go to the maximum, a

¹ A. Aksakof, 'Un cas de dématérialisation partielle du corps d'un médium', *Lib. de l'Art. indép.*, Paris, 1896.

² 'La mécanique psychique', *op. cit.*, p. 169.

peak of 24 kilograms was reached by a series of jerks. From 13 kilograms onwards the medium was nervous and the maximum could only be maintained for a few seconds.

Grunewald attempted, by the most elegant and precise methods, to establish the relationship between the variations in the medium's weight and the ectoplasic phenomena. For this purpose he used the electric recording balances already described. In this way he observed a correspondence between the loss in weight of the medium and the actions of the phantom. The crucial experiment of bringing about a materialization on the second balance has not yet been made. Nevertheless the accumulation of observations permits us to formulate, as a hypothesis, the law of the conservation of the substance, as follows:

The sum of the weight of the medium and of the externalized substance, in whatever form, is constant throughout the phenomena.

This law is subject to the modification that it is probable that in certain cases the sitters contribute substance to the materializations. Crawford appears to have demonstrated this co-operative effect in experiments which we shall discuss later.

187 *Attempts to Analyse the Substance*

Whenever someone has tried to seize one of these materialized forms, it has not so much withdrawn as vanished in the hand, and it is the same with the veils or clothes that they wear. However, Mme Bisson succeeded one day in securing in her hand a fragment of Eva's ectoplasm. It was a small ball, hardly as large as an olive, but she had hardly closed her fingers on it when it melted away. Schrenck-Notzing, who observed the same phenomenon, opened a small box at another séance and expressed the wish that some of the substance would enter it. In a few seconds three modelled fingers approached, touched the box and closed it. Two fragments of skin were found inside it. Microscopic analysis showed that they were of human origin, but it was not possible to say from which part of the body they came.

In September, 1912, it was seen that the substance, in the process of reabsorption, had left marks on Eva's smock. When these traces were analysed they proved to consist of a collection of cells of all shapes, similar to epithelial cells, but without a nucleus. Micro-organisms were also found. At a later séance Schrenck-Notzing collected on the palm of his hand drops of a warm, odourless and

tasteless liquid. A little of it was obtained in a cupel. On evaporation it gave sodium chloride and calcium phosphate as well as organic substances.

Lebiedzinski obtained similar results in 1916. As the substance of the materializations is ungraspable, it must, as he believed, be a question of a secretion or an excretion which is carried with it.

188 *Lowering of Temperature*

All observers of physical phenomena have noticed breezes of fresh air and lowering of temperature during séances. Mrs Speer noticed at one of Stainton Moses' séances (on February 7, 1874) that the room seemed to be filled with cold air, and that the automatically registering thermometer had in fact dropped 3° Centigrade. With Home, also, currents of cold air were often noticed at the beginning of séances.

Morselli includes 'wind coming from the dark cabinet' and 'intense cold' among the forty-two types of phenomena produced by Eusapia. He regards the latter as a sign indicating that manifestations are to follow, and since it was noticed first by the medium's controllers he deduces that it came from her. It was also often observed that a cold breeze came from the scar on Eusapia's head. Crawford did not carry out specific research on this phenomenon. He asked one day for the fluid to condense around a thermometer and observed no variation in temperature, but the experiment was not well designed. He mentions that on other occasions, when trying to stop the flow of the substance, he felt something like small particles projected gently from the medium towards his hand.

With Willy, Schrenck-Notzing clearly felt the cold breeze at a distance of more than two metres, just before striking phenomena; he compared it to the effect of 'a window open in winter in a warm room'. This phenomenon was confirmed by all the observers who were invited to the séances.

Price proceeded to a methodical investigation with Stella.¹ By installing a minima thermometer in the room, he ascertained that there was always a drop in temperature, but on account of the presence of about ten people in a closed space and the effect of solar radiation (the séances took place between 11 a.m. and 1 p.m.), the final temperature was always higher than at the beginning. The greatest fall in temperature was 6.4° Centigrade, and the smallest

¹ 'Stella C.', *op. cit.*

0.2°. The large drops always coincided with powerful phenomena. We can therefore postulate that the expenditure of energy in telergic phenomena is an increasing function of the decrease in temperature.

What is the cause of this lowering of temperature? Observing its coincidence with the breeze, that is to say with the emission of fluid, we cannot help comparing this phenomenon with the expansion of gas under reduced pressure. It borrows heat from its surroundings and thereby causes a fall of temperature. But this phenomenon may be quite different. It may be comparable to an endothermic chemical reaction in which the energy absorbed is used for molecular effects. Our complete ignorance of the nature of the psychic substance-energy does not permit us to relate it to known forms of energy and to apply to it the usual laws of conservation and degradation.

189 *Luminous Phenomena*

When describing ectoplasm, we mentioned that it often appears in a luminous state. It may take a variety of forms at these times — cloud, sphere, dots or flashes. 'I have seen,' said Crookes, 'a solid, self-luminous body, about the size and shape of a turkey's egg, floating silently about the room, sometimes rising higher than any of the sitters could have reached, and finally descending gently to the floor.' With Stainton Moses, Dr Speer saw thirty or forty of these luminous balls coming from the floor; they were about the size of an orange. One settled on the table and gave loud raps 'as if with the base of a lamp'.

These balls were common with Home, according to Lord Adare. They rolled about the floor and, when they touched the sitters, gave the impression of 'a material substance, strongly charged with electricity'. It is interesting to compare this phenomenon with that of ball lightning, which is far from being understood. The dots and sparks which flutter in the air like will-o'-the-wisps, sometimes at a height of three yards, before suddenly vanishing, are also very characteristic. They vary in colour; sometimes they are bluish, sometimes greenish. Morselli observed them with Eusapia in the form of indefinite scintillations, sometimes like small bright globes, sometimes like tongues of fire or inverted glass drops. He asserts that 'it is impossible and even absurd, having seen them once, to liken them to artificial phosphorescence'. Crookes, with the authority of a chemist and physicist, declared that these lights were inimitable. If they rest on an object it is not uncommon for them to

leave a luminous mark on it, as I have myself observed with Gouzyk. We know that they represent focuses of condensation of the nebulous ectoplasm. At the Psychological Institute Eusapia produced every variety of luminous phenomena; she imitated the sparks of an electrostatic machine and made similar sparks appear in Mme Curie's hands.

First Gramont and then Grunewald attempted a spectroscopic analysis of these lights, but even an approximate analysis was impossible on account of their rapid and unceasing motion. This rapidity of movement and the predominance of wavelengths belonging to the middle of the spectrum made it impossible even to photograph them. Ochorowicz estimated that their actinic power was six or seven times less than that of a small pocket torch. But he obtained some distinct impressions by asking Stanislaw T. to produce flashes above a plate covered with objects.¹ The same phenomenon was obtained with 'invisible flashes'.

These lights are usually accompanied by a smell like that of ozone, which is supposed to be phosphorous. Perhaps the lights are caused by a physico-chemical luminescence of the air molecules which accompanies materialization, but our ignorance of this kind of effect is still complete.

We should also mention the diffused light which sometimes surrounds a medium's body. D'Arsonval and Curie saw around Eusapia's head 'a kind of dark zone followed by a luminous zone, similar to the dark space at the cathode in the discharge of a Crookes's tube'.²

¹ J. Ochorowicz, 'Radiographies des mains', *Ann. des sc. psych.*, 1911, 10 to 12; 1912, 1.

² J. Courtier, 'Rapport sur les séances d'Eusapia. . . ' *op. cit.*, p. 559.

CHAPTER VII

TELERGY

1. GENERAL CHARACTERISTICS

190 *Variety of Effects*

We shall combine under the name of *telergy* (Greek: *tele*, afar, and *ergon*, action, work) *those phenomena in which the psychic fluid or the force which is associated with it carries out, more or less visibly, external work on material objects.*

Myers used this word in a slightly different and more restricted sense to indicate the physical force brought into action in the telepathic act. Our extension of the meaning is legitimate from the etymological point of view.

Telergy occurs in spontaneous and experimental forms. The first category includes an important class which are called *poltergeist* phenomena by German writers, and which we propose to call *thorybism* (from *thorybos*, noise). These phenomena are related to those of haunting and we shall study them together. Their dramatic and usually spiritist character and their rare occurrence do not assist scientific investigation. Experimental telergy is of much greater interest for psychical research.

The energetic effects of the psychic fluid are very varied. They include:

- (1) Mechanical effects on objects which are displaced. These phenomena come under the heading of *telekinesis* (from *tele*, afar, and *kinesis*, movement).
- (2) Physical and chemical effects, such as luminous, thermal, electrical and magnetic phenomena.
- (3) Mechanical effects on a very small scale, microscopic and perhaps atomic, such as certain internal raps and the dissociation of matter. We shall give the name of *hyloclasty* (from *ule*, matter, and *klasis*, breaking) to these phenomena.

191 *Characteristics of the Energy in Question*

Energy usually occurs in psychic phenomena in a mechanical form. Tables rise and turn, objects move, walls are shaken by blows, furniture creaks, and so on. The elusive force which produces these effects is difficult to measure, but it is seen to be about as powerful as a human being. Although capable of very delicate effects, its strength seldom exceeds that of a healthy man. However, exceptional cases in which it did so are recorded in the literature of the subject. For example, Stainton Moses caused to rise a heavy mahogany table belonging to Sergeant Cox, which could hardly be moved by two men;¹ Home brought about the levitation of a piano;² Ochorowicz and Lebedzinski saw in full daylight a cupboard weighing more than 100 kilograms sliding over the carpet. In good light Schrenck-Notzing saw the corner of a piano which weighed 650 kilograms rise to a height of fifteen centimetres.³ A table with a man on it was lifted from the ground at a sitting with Eusapia, etc. It is true that the last-mentioned medium, in Lombroso's presence, registered a force of 110.5 kilograms on the dynamometer.⁴

This last observation supports the hypothesis that the force exerted in these phenomena is the exteriorized force of the subject himself, which, in certain cases of nervous tension, may greatly exceed the normal. But the law of collective psychism, extended to physical phenomena, suggests that the medium can borrow from the sitters a certain amount of energy to add to his own. This would explain the feeling of exhaustion sometimes experienced after séances and Crawford's observation of loss of weight. The important fact is that the force used is of the order of magnitude of human strength. Even in the most violent manifestations no walls have ever been thrown down, nor doors destroyed.

However, the psychic force sometimes produces effects which seem to be of a superhuman order. We may then suppose that the energy liberated is used in unknown ways with nearly maximum efficiency. When a nail is struck with a hammer three principal effects are produced: a mechanical effect, which is the driving in of

¹ F. W. H. Myers, 'The experiences of Stainton Moses', *Proc. S.P.R.* Vol. 9, Part 25; Vol. 11, Part 27, 1893-95.

² Adare, *Experiences in Spiritualism with D. D. Home*, London, 1869. Edition published in 1924 by the S.P.R.; *Proc.*, Vol. 35, Part 93.

³ Schrenck-Notzing, *Les phénomènes physiques de la médiumnité*, Payot, Paris, 1925, p. 113.

⁴ *Ann. des sc. psych.*, 1908, p. 35.

the nail; a thermal effect, which is the rise in temperature of the nail; and a vibratory effect which is perceived as a sound. The two former effects use nearly all the available energy, but it is probable that paranormal sounds are produced without this loss in the form of heat and movement, which explains the terrifying din to be heard in haunted houses, for example. This would require only a small quantity of energy, although it sounds as if it is produced by supernatural giants.

The same is true of the bright lights which appear around the subject; since, like the light of glow-worms and phosphorescent fish, they are not accompanied by heat, they require very little energy. We may also mention the slates which Slade pulverized at a distance, although they could not be broken by violent blows with a heavy object. The same medium also unexpectedly produced explosive breaks in two places in the post of a screen which stood two metres behind him in Zollner's house.¹ The latter calculated the necessary force at about two horse power. I have myself witnessed at Warsaw the destruction of a heavy oak stool, inexplicable by normal means. And finally, in certain phenomena of 'dematerialization' which have been described by serious writers, if only the molecular dissociation is taken into account the energy expended is much less than one would expect. The force would thus be of the human order of magnitude, although superior in quality to all the forces which we can control in our laboratories.

192 *Intelligence and Purposiveness*

The main point about these physical phenomena is their intelligent and purposive character. 'From the very beginning of my researches,' wrote Crookes, 'I observed that the power which produced these phenomena could not be regarded simply as a blind force. An intelligence seemed to direct it, or at least to be associated with it.' And he added: 'It is reasonable to conclude that the force which produces movement outside the body is the same as that which produces it inside'.²

The force seems always to act with an *end in view*, either in response to a wish expressed or even merely thought, or in a spontaneous attempt to convince the persons present. As Curie observed with Palladino, the movements which took place always showed remarkable skill, even in darkness, and seemed to deliber-

¹ 'Die transzendente Physik', op. cit.

² Crookes, *Researches into the Phenomena of Spiritualism*.

ately avoid injuring anyone. Séances in which the furniture is broken and sitters receive slaps in the face are very rare, and even then the intention is apparent. Spiritists ascribe such phenomena to 'evil spirits'. Often the 'spirit' is content to be humorous. When objects are lifted or thrown they do not follow a regular trajectory as they would under the influence of a physical force, but seem to be carried by an invisible hand and stop or change direction with the greatest ease. The noises produced are always in a *code* which can easily be turned into a conventional alphabet. Tables not only turn, but give messages.

The intelligence governing these phenomena is sometimes the conscious intelligence of the subject. In an apparently waking state Home exerted pressure at a distance on Crookes's dynamometer. Slade, voluntarily and in full daylight, made Gibier's furniture dance and sent him slates by invisible hands. Eusapia announced the phenomena she was about to produce. She cried, 'Look out! I am going to sprinkle your face with flour. . . . Now I am going to lift the table with my left knee. . . . I cannot reach that object'. At the same time her muscles contracted. It was as if she started to make the movement physically and stopped at once. The contraction seemed to correspond to the intensity of the phenomenon. Bottazzi pointed out this synchronization which was particularly well observed by Ochrowsicz in the Warsaw séances. At l'Agnélas Maxwell also noticed slight movements which fell short of the objects displaced.

In most cases the intelligence at work seems to be independent of that of the subject. When the subject has spiritist inclinations it impersonates a dead person, to whose name it answers. It really belongs to one of the dissociated layers of the subject's personality. Thus prosopopesis, which is one of the typical characteristics of psychic states, occurs in physical phenomena also, in the usual forms of possession and incarnation. Familiar as we are with this division of personality, we shall attach to it only secondary importance, as in the case of mental phenomena. We shall proceed to study the phenomena of telergy without paying any attention to the external beings to whom they are attributed.

II. PHENOMENA OF TELEKINESIS

193 *The Levitation of Tables*

The history of telekinesis begins with the study of moving tables and we have already described how Gasparin showed with his

sprinkling of flour that these phenomena could not always be explained by unconscious muscular movements. This excellent experimenter started by demolishing Chevreul's explanation by precise calculations of the muscular effort necessary to move the table. He found that a four-legged table which weighed, with its load, seventy-five kilograms, could be turned by fingers, but not raised or rocked. But in fact he had obtained eighty lifts as well as a score of rotations. By a careful analysis he showed in addition that the lifts took place just when the conditions for this to occur by normal mechanical means were at their most unfavourable. He therefore rejected the hypothesis of a muscular action, voluntary or otherwise, and adopted the remaining explanation, which was that of fluid directed by the will.

Gasparin said that by 'fluid' we should understand a physical, and not a supernatural, medium. But, he was asked, how can a fluid cause a table sometimes to turn, sometimes to lift, sometimes to resound with blows? With remarkable insight he replied, 'Because the fluid is directed by the will sometimes to one leg of the table and sometimes to another. Because the table becomes in some sense part of ourselves, becomes one of our limbs and carries out the movements we think of in the same way as does our arm. Because we are not conscious of the direction which we give to the fluid, or of our control of the table, and so not even realize that any fluid or force is in action'. Setting aside prosopopesis, which Gasparin did not discuss, we see how closely this interpretation approaches the truth.

194 *Crookes's Balance*

Crookes abandoned drawing-room tables and took the problem into the laboratory in order to obtain precise measurements.¹ He invented a special balance made of a strip of wood, one end of which was suspended from a spring steelyard and the other rested on the edge of a table. By placing the ends of his fingers on the latter point of contact, Home made the steelyard register an increase in weight of three and a half pounds. No normal human effort could produce such a result. When he brought all the weight of his body to bear on the point of contact by placing his foot on it, Crookes only obtained with great difficulty a momentary increase of between a pound and a half, and two pounds. Using the balance, he observed that Home

¹ 'Researches into the Phenomena of Modern Spiritualism', op. cit.

gave a constant increase of 8 pounds to readings of 23, 43 and 27 pounds.

In reply to an objection made by the physicist Stokes, Crookes repeated his earlier experiments with a tub of water interposed between the medium's fingers and the edge of the plank. The same result was obtained. Then he improved the apparatus. He connected a pointer and recording cylinder to the steelyard and made the plank rest on the edge of the table with a knife between them. In order to prevent disturbance of the water which transmitted the 'psychic force', he immersed in the tub a copper cupel pierced with holes, within which Home placed his fingers. Having thus eliminated all possible sources of mechanical pressure, he still obtained increases in weight which varied with time. Finally, with only the air as a transmitting medium, Crookes obtained the same phenomena, Home's hand being three feet away from the dynamometer.

He devised another experiment. He asked another subject to place his hand above a tambourine fitted with a needle which registered the vibrations of the membrane, and heard a series of sounds like moving grains of sand. Home gave the same kind of vibrations, but slower and softer. Such were Crookes's 'laboratory' experiments which he carried out on the hypothesis of the 'psychic force'. Crookes's 'psychic force' was identical with Gasparin's 'fluid'. More sensational manifestations must also be mentioned: moving of chairs and armchairs, levitation of a heavy table, and the lifting up of a bottle full of water and a glass which knocked themselves together and thus answered questions, etc.

Crookes's balance was subsequently used by other experimenters, notably by S. Alrutz, who obtained similar results in 1905.¹ The increments in tension shown on the dynamometer were up to 100 grams in magnitude, all possible precautions being taken to prevent anything from acting on the long arm of the balance.

195 *The Case of Eusapia*

If Home was the most powerful of all known physical mediums, Eusapia Palladino was studied for the longest time, and by the greatest number of scientists. Morselli, who wrote a large book about her² distinguished forty categories of phenomena which she

¹ *Ann. des sc. psych.*, 1909, p. 307.

² H. Morselli, *Psicologia e spiritismo*, impressions and critical notes on the mediumistic phenomena of Eusapia Palladino, 2 vol., Bocca, Turin, 1908. Summarized in *Ann. des sc. psych.*, 1907, 4 and 5.

could produce, and Lombroso added four others.¹ But this was an empirical classification. For example, Morselli distinguished three main classes of telekinetic effects: effects produced with contact, but disproportionate to the force exerted; actions at a distance; and changes in the weight of bodies. But the phenomena are always of the same nature, being caused by an appropriate action of the psychic fluid. The weight of the bodies is no more changed than it is when one raises a body with one's hand. Indeed, in many cases, the objects are transported by a more or less visible hand.

The important phenomenon of the levitation of a table was scientifically studied with Eusapia on several occasions. The dynamometer was used to measure the force exerted. The weight which was necessary to prevent levitation was in general between 5 and 6 kilograms. At Milan one side of the table was attached to a dynamometer which registered 35 kilograms. The circle was formed with the sitters' hands *on the table*, so as to oppose the phenomenon. The tension gradually *decreased* to zero, the dynamometer then resting on the table which had become horizontal. When hands were held *under the table* the tension *increased* to 5.6 kilograms. At Warsaw similar results were obtained with an elliptical dynamometer. The force exerted at a distance by Eusapia was three times greater than she could normally exert. At the Psychological Institute at Paris, many controlling and measuring apparatuses were used.

In other experiments the two legs of the table nearest the medium were enclosed in wooden sheaths and the table-legs connected to electrical contacts. Eusapia's chair rested on a Marey balance and later on a steelyard, the readings of which were recorded in another room. The complete levitation of the table could thus be observed with no possibility of fraud. One day the legs even rose out of their sheaths. The height reached was 60 centimetres and the phenomenon lasted for between 27 and 52 seconds. When the top of the table was encased, the table still rose in the same way, which indicated that the force concerned was probably acting on the table-legs. An important observation was made: during the levitation the medium's weight increased by the weight of the table, as if Eusapia were lifting it with her arms; when the pressure decreased the difference was reflected in the change of the medium's weight. Hence the committee's conclusion: 'The fulcrum of the force which raises objects in various

¹ C. Lombroso, *Ricerche sui fenomeni ipnotici e spiritici*, Turin, 1909.

ways seems to lie on the medium herself'. This law was later more clearly stated by Crawford.

196 *The Mechanism of Telekinesis*

These observations on Eusapia enable us to study the mechanism of telekinesis. They confirm the inferences of Gasparin and Thury, but with an extension which they did not foresee. This '*ecténique*' force, acting as an extension of the subject's limbs under the guidance of her will, was not a force in the usual physical sense, but occurred with a more or less anthropomorphic structure appropriate to the desired end. From Eusapia's back or side a hand would be seen to emerge in the half-light which grasped the object and was reabsorbed when the desired movement had been made. Sometimes the hand was only a stump or a formless extension. In 1895 Lodge compared these fluidic formations with the pseudopodia which amoebae send out in all directions according to their needs. Chiaia observed that they could originate at any part of the body and take the necessary forms: levers, stalks with adhesive ends, arms and hands, according to the effect to be produced and the medium's inclination. Bottazzi called them '*medianimic limbs*' and observed that they could not only carry out movements but also perceive them.

In this way the teleplast exteriorized motricity and sensibility. Having been asked to make some prints in a dish of clay at a distance, she cried after a moment, 'Ah! how hard it is!', and the marks of her five fingers were found in the clay. The psychic fluid sometimes materialized under Eusapia's clothes or behind the curtain of the cabinet and produced swellings which were taken by the Cambridge experimenters as attempts at fraud. Eusapia's petticoat moulded itself round an object as if a hand had formed inside it. Her dress wrapped itself round the leg of the table when it was levitated. This medium's usual radius of activity was two or three metres, but others have surpassed this and we must admit that it can be considerably extended in certain circumstances.

197 *Displacement of Small Objects*

The study of the displacement of small objects showed one of the most curious modifications of ectoplasm. In the waking state or rather in a state of light hypnosis Eusapia could make small objects move, even in full light, by moving her hands at some distance above or around them. In 1895, at l'Agnélas, she worked with M. de

Gramont's letter-scales. By holding her hands together in a point 3 or 4 centimetres from the scale and making a slight downward movement, she produced a similar movement in the scale, which in time began to oscillate as if she was moving it by a thread. The lighting was sufficient for any fraud to have been detected. Several times she made the scale go to its lower limit, which represented a weight of 50 grams. By moving her hands horizontally she made the letter-scales slide on the table and finally fall. At Bordeaux the same experiment was carried out at Maxwell's home (1897). A pressure of 240 grams was produced at a distance of 15 centimetres from the scale. Eusapia experienced a sensation of cold down her spine and a tingling in the tips of her fingers when the scale descended.

So far no one had noticed any material connection between the medium's fingers and the displaced object, but at Palermo, in 1902, a slender thread like a hair was noticed and Eusapia was accused of fraud. Bozzano and Peretti described the incident. It was the medium herself who had happily told them of the presence of the thread. They pulled it and it gave like rubber and suddenly broke, vanishing. At the same time Eusapia had a nervous shock. Further experiments showed that when the subject put the fingers of her two hands in line, four slender whitish threads emerged from them and joined them.

In a state of complete trance Eusapia's somnambulistic personality explained to Ochorowicz that there was an emanation from the medium's hands, as well as from those of the sitters, which became concentrated in bundles of rigid threads which held up, attracted or repulsed objects. When the chain was broken these fluidic supports vanished and objects suddenly fell down. This kind of break in the current was always painful to the medium. The Polish scientist methodically verified these assertions with Eusapia.¹

He obtained further striking confirmation in experiments which took place fifteen years later in 1909 with Stanisława Tomczyk.² He asked this remarkable medium, when she was in trance, to stop a grandfather clock without opening its case, which had a glass door. She placed her hand on the glass and concentrated. In about a minute the heavy pendulum slowed down, but did not stop. The amount of light, which interfered with the phenomenon, was decreased, and the pendulum then stopped. The medium, who was

¹ *Ann. des sc. psych.*, 1901, p. 204.

² 'Un nouveau phénomène médiumnique', *Ann. des sc. psych.*, 1 to 5, 1909.

very tired, explained that little Stasia (her secondary personality in the trance state) had placed her two fluidic hands, one on each side of the pendulum to stop it. The glass, it appeared, was impermeable to the fluid, but not to the force which had acted through it. Stasia suggested, to complete the demonstration, that she should make the stopped pendulum start again without opening the glass door, stop it when the door was open merely by looking at it, and start it again under the same conditions. These experiments, which may be considered as fundamental as those of Crookes, were completely successful.

The first of these phenomena was the most difficult to obtain, requiring a quarter of an hour. Carefully studying the third, which was a repetition of it, Ochorowicz observed that the movement of the pendulum did not start gradually. It first made a half-oscillation from right to left and then resumed its normal motion. Stasia declared that she had not used her condensed hands. It is noteworthy that the medium, as usual in a somnambulistic state with her eyes closed, had merely made various gestures as if to hypnotize the pendulum. The two last experiments described exhausted her.

198 *Ochorowicz's 'Rigid Rays'*

Wishing to throw some light on the problem of fluidic threads, Ochorowicz chose objects which were of a difficult shape to lift up. A ball, for example, a compass and a cylindrical glass dish-cover. Numerous photographs, taken simultaneously by four cameras, confirmed the reality of the phenomenon. The magnesium flash instantaneously stopped the levitation and the object fell down, unless the medium was warned and prepared to resist the nervous shock. Ochorowicz's hand was lifted up like other objects; he felt a cold breeze and the touch of a very fine thread. The needle of the compass was made to rotate without lifting the lid. The needle of a small toy called a magic compass began to turn rapidly, the medium's hands remaining motionless. In a game of roulette the moving ball went towards the numbers selected, except when the speed was too great. Similarly, the medium could not stop bodies which were falling too fast, such as a light ball rolling down an inclined plane.

Ochorowicz derived from all these experiments the hypothesis of 'rigid rays' to explain all mechanical actions at a distance.¹ These rays could bend, find their way through cracks, and form themselves

¹ 'Les rayons rigides et les rayons X*', *Ann. des sc. psych.*, April to December 1910.

into skeins so as to hold objects of any shape and kind. It appeared, however, that metallic bodies were more easily lifted than insulators.

Ochorowicz was able to obtain traces of these rays on pulverulent substances, notably on a smoked plate. He found that they entangled the object to be lifted in a more or less fine network and adhered to the surface, however polished it might be. The rays could pass through a flame without losing their properties, the only effect being a very pleasant sensation experienced by the medium. They could not displace objects immersed in water, nor traverse films of soap solution, but they could attract and repel these films without breaking them. This is interesting because the delicate equilibrium of surface tension in these films can be destroyed by an ordinary hair.

The rigid rays could transport microscopic particles of liquid, as was seen when the medium was asked to connect by a fluidic thread a drop of iron perchloride and a drop of yellow potassium ferrocyanide. The red precipitate formed by the combination gradually appeared. The rays even transported solid bodies. They were not deviated by a magnetic field. They closed an electric circuit and discharged electrified bodies, but with difficulty. Their action in these cases was similar to that of a slightly conducting body. The experimenter was able to photograph and even to radiograph the rigid rays. The threads were not homogeneous but were dotted and showed inclined streaks.

The medium had a feeling of torpor and of tingling at the ends of the fingers when she produced rigid rays.

199 *Schrenck-Notzing's 'Efflorescences'*

The results of these experiments were completely confirmed when they were resumed by Schrenck-Notzing with the same subject.¹ The levitation of numerous small objects of all shapes proved that her hands emitted extremely fine threads which supported the objects, sometimes by their mechanical arrangement and sometimes by becoming attached to them by an adhesive force. For example, a ball with a very smooth surface was raised by three threads arranged in a triangle. The same ball was moved about under an upturned drinking-glass with which it was covered, which confirmed that the rays could pass through the narrow space between the glass and the table, and curve before becoming rigid. When the glass was placed

¹ 'Les phénomènes physiques de la médiumnité', op. cit.

on a slab of the same material which made a hermetic seal, movement was no longer possible.

Enlarged photographs show real efflorescences coming from the fingers and directed towards the object lifted, adapting itself to the desired end in co-ordination with the muscular movements of the hand. The enlargement shows curious details which exclude the hypothesis of fraud. The structure of the teleplastic threads is very uneven and seems to be nebulous in places. The ends are connected to the fingers, at the nail and at the tip. In the experiment with the scales both threads passed underneath the scales, one making the right scale descend and the other making the left scale rise. To produce the phenomenon artificially one of the threads would have had to go over the right scale. Schrenck-Notzing compared the threads with microscopic photographs of various ordinary threads — linen, silk, cotton, hair, etc. — and found differences of structure which were alone sufficient to make the authenticity of the phenomena seem probable. This worker substituted the term 'rigid efflorescences' for Ochorowicz's inaccurate expression, 'rigid rays'.

200 Crawford's 'Psychic Lever'

Miss Goligher's psychic faculty enabled Crawford, by a long and detailed series of experiments, to establish definitely the mechanism of telekinesis.¹ The objectivity of the phenomena was established by phonographic recordings, photographs, and readings on the balance and dynamometer. The precision of the results obtained and their agreement with each other supported the authenticity of the phenomena. This was realized by Schrenck-Notzing, who made a thorough analysis of the results.²

We shall now describe the most important experiment. The medium sat on a chair on a weighing-machine. The table was in the centre of the circle formed by the sitters and at a distance from the medium determined empirically by the 'invisible operators' themselves. This distance was about a yard. They were asked to lift up the table and support it in the air. Instantly, *the medium's weight increased by the weight of the table*. This relationship was not completely accurate; the average of a large number of trials showed a deficit of three per cent of the weight of the table. By weighing the

¹ N. Crawford, *The Reality of Psychic Phenomena, Experiments in Psychical Science, and The Psychic Structures at the Goligher Circle*.

² *Les phénomènes de la médiumnité*, op. cit.

members of the circle, it was found that they were taking a small part of the weight. A pressure exerted on the levitated table increased by that amount the reading of the weighing-machine. The resistance experienced was elastic, as if the table was resting on a cushion of compressed air. This resistance was very strong and the table could not be made to descend, although it was made to oscillate. When the attempt to push it towards the medium was made, however, the resistance was rigid.

From these first observations Crawford deduced that the table was lifted by a *cantilever* — a psychic lever imbedded in the medium and forming part of his body. He thought at first that the lever had a fulcrum on the floor. He then explored the space under the table during the levitation, using in succession his hand, a glass rod, a manometer, and a planchette with a spring which could make an electric bell ring, without finding anything abnormal. But when he put a solid body of any kind whatever between the medium and the table, the phenomenon was at once interrupted and it was difficult to make it start again. Other experiments with the table on the weighing-machine and the medium in the circle confirmed the hypothesis of an elastic substance, invisible and penetrable, which emerged from the medium's body at the height of her ankles, taking the form of a bent lever of varying curvature, which could raise vertically, tilt, or overturn a table, so long as its action was not hindered by material bodies.

Obviously we have here another example of adaptation to the desired end of the instrument created by the medium's secondary personality. Crawford obtained even clearer evidence of this. Using a heavier table he observed that the weight was not all transferred to the medium and that *the lever had a fulcrum on the ground*. This fulcrum altered its position according to the effort required, so as to solve the differing mechanical problem of each experiment. Exploring the ground with a manometer and dynamometers gave the vertical and horizontal components of the force used.

The experimenter made use of his professional skill in this piece of research, and he studied all kinds of details. He calculated that, if the theory of a lever was correct, the addition of increasing weights to the levitated table should finally make the medium and her chair overbalance forwards. He verified this with a load of sixteen kilograms. Miss Goligher felt no discomfort, as the pressure was evenly distributed over her body, which was in a cataleptic state, but

her feet slipped and she was dragged forward. The 'operators' prevented her from falling by making the lever touch the ground. When they were asked to describe the exact shape and measurements of the lever, they said it was an elastic pipe, ten centimetres in diameter, which came from the medium's legs, proceeded horizontally eight or ten centimetres above the ground and rose underneath the table, where it expanded into a kind of mushroom. If the pressure exerted required it, this single tube could divide into two branches which gripped the two nearest legs of the table. This would explain the levitation of the table with an encased top which was used with Eusapia at the Psychological Institute.¹

201 *Theory of Raps*

Without considering the messages they convey, the 'raps' heard at physical séances are of infinite variety. There are noises of all kinds from the slightest cracking sound to a blow resembling that of a hammer on an anvil. They imitate, often on request, dance tunes being drummed by fingers, the steps of a man or the gallop of a horse, a ball bouncing, wood being sawed, a floor being polished, etc. These imitations, which have been described by all investigators, set a curious problem in molecular physics to which we shall return later. It is for this reason that Richet regarded them as the most interesting phenomenon of psychical research. Crawford showed that his subject produced them with temporary fluidic projections — Ochorowicz's rigid efflorescences. These invisible tentacles, varying in thickness according to the loudness of the noise to be produced, come from various parts of the subject's body. The distance to which they can extend depends on how favourable the conditions are. For complex noises several of them are produced and the 'operators' use them like the keys of a piano. The lever used to raise a table may be formed from a cable made from a number of ectoplasmic threads; this was Schrenck-Notzing's opinion.

¹ After Crawford's death an English scientist, Fournier d'Albe, had a series of twenty sittings with Miss Goligher, between May and August 1921, as a result of which he threw doubt on the honesty of this medium and her family (*The Goligher Circle*, Watkins, London, 1922). However he stated that he had witnessed normally inexplicable phenomena such as the spontaneous removal of a porcelain stopper from a jar of mercury, and he was never able to detect fraud. In the opinion of all psychical researchers, including Barrett, who witnessed certain phenomena in Crawford's presence, this brief investigation should not be allowed to discredit the Belfast physicist's six years of work. In the opinion of Schrenck-Notzing, indeed, it confirms the validity of the earlier work.

Crawford was unable to see either these tentacles or the lever, even in very strong red light. From 1919 onwards he used phosphorescent calcium sulphide screens. He could then see extremely flexible ectoplasmic projections leaving the medium's body and their tips taking various forms — points, hooks, swellings, and so on. He could even photograph them, with certain precautions. For example, he obtained a photograph of a levitated table. But the lever did not correspond with the *a priori* conception of geometrical 'lines of force' which one might be tempted to form. It was an ectoplasmic secretion like those of Eva, leaving the medium's feet and rising almost vertically in an uneven column to the table-top. The overall impression was that of compressed rag, but this substance must have had a certain internal tension and considerable rigidity to be able to lift the table. The extraordinary polymorphism of the psychic substance, which has been observed with other teleplasts, explains this contradictory impression given by the photograph.

202 *Experiments With Willy*

Schrenck-Notzing verified the laws of telekinesis as stated by Crawford with other subjects besides Eusapia and Stanislawa. He related them to the laws of teleplasty which we shall study later. We should mention his experiments with Willy Schneider, which took place in 1922 and 1923, because they enabled him to convince ninety-four distinguished people of the reality of the phenomena. Fifty-four of these were university lecturers or scientists.¹ The séances took place in red light. Phosphorescent pins were fastened along the medium's arms and legs. He was enclosed in a gauze cage and his hands were held in a narrow opening. Later the objects to be moved were enclosed in the cage while the medium, under control, remained outside it. In experiments under the conditions first described, the teleplastic formations did not pass through the gauze, but went through the hole. After a séance at which the medium had made a musical box play on the other side of the gauze, at a distance of between 35 and 50 centimetres, it was observed that at the height of the handle the material had been stretched and a small hole of 2 or 3 millimetres in diameter had been pushed through it, without breaking the threads. This hole was in a straight line joining a point on Willy's shoulder or elbow to the handle of the musical box.

¹ 'Les phénomènes physiques de la médiumnité', op. cit., p. 313.

This observation, made at three séances, showed that a solid organism in the form of a thin rod left Willy's side and passed through the screen to produce the effect requested. When a piece of tissue-paper was attached to the gauze, a tear 7 centimetres in length was made in it. Sometimes the fluidic projection groped before finding the musical box. When other accessible objects were in question, they were moved by hands of more or less perfect formation. The force used was relatively small. Movement of the musical box, which weighed seven and a half kilograms, was however obtained. In all these phenomena care had to be taken not to interfere with the line of communication between the medium and the phenomenon, so as not to produce a sudden shock to the medium and cessation of the phenomenon. This was also repeatedly observed by Crawford.

At the Psychological Institute at the University of Munich an apparatus was used to detect the passage of teleplastic formations. It consisted of a short horizontal wooden cylinder (*manchon de Curie*), nearly closed in the middle by a cardboard rectangle bearing a rod connected to a moving needle on an external dial. When a body entered the tube it pushed the cardboard, the displacement of which could then be measured. One end of the cylinder faced the musical box in the gauze cage, the other end was joined to a sleeve into which the medium put his right arm. This enabled the reality of telekinesis to be established with good control conditions, and at the same time the details of the process with Willy to be studied.

203 *Grunewald's Experiments*

Grunewald's experiments with two weighing-machines, which we have already mentioned (58), also confirmed that the weight of a lifted object is usually added to that of the subject. A clairvoyant subject who witnessed these experiments announced the appearance of teleplastic forms at the instant when the apparatus registered changes of weight.¹ In 1920 these experiments were repeated in Schrenck-Notzing's presence, with all desirable control conditions.² Five or six levitations were in accordance with this law. In the others interferences occurred, caused by the medium's movements on the weighing-machine or by the intervention of the controllers.

¹ F. Grunewald, 'Physikalische-mediumistische Untersuchungen', op. cit.

² Schrenck-Notzing, 'Les phénomènes physiques de la médiumnité', op. cit., p. 121.

In these cases the weight registered was always greater than the combined weight of the medium and the table.

We should observe that this would not have been the case if the medium had not had a light object to lift. In the case of a heavy object we know, from Crawford's work, that the lever takes a fulcrum on the ground. Perhaps Schrenck-Notzing was wrong in describing the method of the lever pivoted on the subject's body as the 'fundamental law of telekinesis'.

In another series of experiments Grunewald studied with a Danish subject the 'telekinetic influences exerted on a balance enclosed in a glass case'.¹ The subject sat down before the balance in full daylight and in the presence of several people. After a few minutes the balance began to oscillate. The oscillations increased in amplitude until a constant amplitude was reached, the magnitude of which differed from one séance to another. This could not be explained by any pushing of the table because of the careful supervision. The regularity of the movements also made this an unlikely cause. They were recorded electrically by a mercury contact which acted as a damping device and by a mirror galvanometer. The table also made small oscillations which were recorded separately. These oscillations were produced telekinetically by the subject who kept his hands crossed on his chest.

204 *Price's Experiments*

Price's experiments in 1923 with Stella² deserve to be mentioned for the ingenious use he made of instruments. He worked with a strong red light. The movements of the table were very characteristic; it undulated as if 'submerged in running water'. This phenomenon is typical of the elasticity of teleplastic emanations, and should be compared with similar observations made by Crawford. Price observed complete levitations. In one case the table stood firmly on two legs and would not return completely to the ground under the combined efforts of the sitters. Price accepted the theory of the psychic lever.

Price used two specially constructed tables to obtain well-controlled observations on telekinetic phenomena. The outer table had trellis work between the legs, and the inner table was in the form of a box and contained various small musical toys as well as

¹ 'Compte rendu du Congrès de Varsovie', op. cit., p. 267.

² 'Expériences scientifiques avec un nouveau médium', op. cit.

paper and pencil. In the top of the inner table there was a trap-door which could only open upwards and was flush with the top of the outer table, in which an opening was contrived for this purpose. In these conditions instruments were played, the trap-door opened and words written. These phenomena were accompanied by displacements of a small blue gleam of light inside the cage.

Another piece of apparatus used was the 'telekinetoscope'. This consisted of a copper cup containing an electric contact connected by a well-protected cable to a bell at a distance. The contact was separated from the outside air by a film of soap solution and by a glass sphere. This made a hermetic enclosure. When the bell rang it demonstrated the penetration of an ectoplasmic formation. Price also used a spring contact which measured the pressure exerted by the ectoplasm, a very sensitive contact with moving tongues which measured slight air currents, and an apparatus consisting of a projector emitting red light and a phosphorescent screen on which the formations appeared in silhouette.

205 *Levitation of the Subject*

The levitation of the subject himself is among the most curious phenomena of telekinesis. Religious history includes many accounts of this phenomenon with possessed persons and saints. Perhaps the Ascension of Christ was a metapsychic phenomenon, as may have been the tongues of fire at Pentecost. Rochas's collection of documents on this subject is incomplete.¹ In 1928 Leroy added to it all the cases ascribed to religious ecstasy.² A case which is often quoted is that of Home who was levitated in the presence of several distinguished witnesses and went out of one fourth floor window to return by another. This occurred on December 13, 1868. On other occasions he rose to the ceiling and was able to make marks on it. Crookes was present three times at these levitations, of which there were more than a hundred. Stainton Moses was levitated several times.³ Once the chair on which he was sitting rose 30 or 35 centimetres above the ground; on another occasion he was rapidly lifted from a chair on to a sofa; and once his feet touched the head

¹ A. de Rochas, *Recueil de documents relatifs à la lévitation du corps humain*, Leymarie, Paris, 1897. Additional material in *Ann. des sc. psych.*, 1901, 1.

² Olivier Leroy, *Contribution historique et critique à l'étude du merveilleux*, Librairie de Valois, Paris, 1928.

³ F. W. H. Myers, 'The Experiences of Stainton Moses', *op. cit.*

of a sitter. These phenomena occurred also with Florence Cook and Eglinton. Luciani and Ochorowicz observed levitations with Eusapia.¹ Morselli also observed that Eusapia was lifted with her chair to a height of 80 centimetres. At Milan, while in a cataleptic state, she was lifted with her chair on to the table.

Maria Vollhart, a subject who was studied for two years by Dr Schwab, was levitated about a dozen times with excellent control conditions. The phenomenon was confirmed by photography on two occasions.² The subject was lifted with her chair to a height of 30 centimetres and remained there for a minute. On another occasion the height was such that the sitters could not reach to below the subject's arms without standing up. Another well attested case is that of Willy.³ He was levitated several times at Vienna in the presence of Professors Holub and Berzé and of the writer Hans Muller. Dressed in a close-fitting black garment marked with phosphorescent pins, his movements were clearly visible in red light. As if borne on an invisible cloud he rose horizontally to the ceiling, where he remained five minutes, rhythmically moving his bound legs. He descended, as he had risen, abruptly. There were strict control conditions. Geley, on his last visit to Vienna, also witnessed Willy levitating at Dr Holub's home and was convinced of the genuineness of the phenomenon.

Schrenck-Notzing read to the Paris Conference in 1927⁴ a paper on thirty-five cases of levitation of a subject who also produced, by concentration of will, telekinetic phenomena inside closed boxes by means of efflorescence and teleplastic organs. The subject was levitated in a vertical position and became horizontal about a metre and a half above the ground. He could travel about a metre in this position. The phenomenon lasted twenty-five seconds.

Theoretically the levitation of the subject is no more puzzling than that of an object. The teleplastic levers take a fulcrum on the ground. They may take any form from a simple strut or cloudy mattress to the most complete human materialization. There is no escape from the law of gravity, but an equal upward force is opposed to the downward force of gravity. The energy used is not greater than that displayed in good telekinetic séances.

¹ *Ann. des sc. psych.*, 1906, p. 653.

² F. Schwab, *Teleplasma und Telekinese*, Pyramid Verlag, Berlin, 1923.

³ Schrenck-Notzing, *Experimente der Fernbewegung*, U. D. Verlag, Stuttgart, 1924.

⁴ *Compte rendu du Congrès de Paris*, p. 94.

206 *Rhine's Psycho-Kinesis*

Systematic experiments in telekinesis have been abandoned in Europe for about the last fifteen years, in the absence of mediums as powerful as Home, Eusapia, Willy or the other subjects we have mentioned. Another cause for this neglect is the suspicion with which British psychical researchers regard physical phenomena. In the United States the study of telekinesis has been resumed in a form very different from that described so far.¹

Having applied his statistical methods to the phenomena of clairvoyance, Rhine decided to extend them to those phenomena of action at a distance which lend themselves the most easily to a series of repetitions. He commenced experiments on dice-throwing at Duke University in 1934. The subject throws a pair of dice attempting to influence the total score by will-power. If the desired score is seven, for example, it will be expected to occur twice by chance alone in a series of twelve trials. At the end of a long series of trials the critical ratio can be calculated in the same way as in E.S.P. experiments.

In answer to criticisms the conditions of the experiment were progressively improved and a rotatory machine was used for throwing the dice, which were made of plastic and carefully calibrated. Rhine obtained positive results, but they were only slightly above chance expectation and he did not publish his first paper on these experiments until 1943. He considered that the theory of action at a distance was justified by the constant decrease in the number of successes, in spite of the replacement of subjects. This decrease is, according to Rhine, 'the most constant law of parapsychology'.

Another indication of psychological laws at work was that the PK effect was more successful when a larger number of dice were used. Rhine had as many as ninety-six dice thrown at a time by the machine. He admitted that these results were paradoxical, as more force should be required to influence several dice. But he does not think that the force concerned is of the physical order, which would be difficult to understand if he did not mean by this that it is not blind like a physical force. But this does not solve the mystery. The more one accepts the idea of the temporary formation of an organ

¹ Louisa and J. B. Rhine, 'L'action psychokinétique', *Revue métapsychique*, 1, 1948; cf. also *The Reach of the Mind*.

to carry out certain actions, the more difficult one finds it to accept the idea of a force which can influence the falling of several dice so that a previously determined score is obtained. The statistical results are not sufficiently above chance to carry conviction.

At the Utrecht Conference Dr McConnell of Pittsburgh read a paper on his psycho-kinetic experiments carried out with 393 subjects, students and friends, each of whom tried to influence the faces of 432 dice, one third of which were thrown from a cup and two thirds by means of a machine.¹ The fall of the dice was filmed. The overall results were approximately at chance level. The only phenomenon observed was the decline effect.

IV. PHENOMENA OF HYLOCLASTY

207 *Apports*

The telergic phenomena which we have been studying are effects exerted on matter, but on a macroscopic scale within the human range. These effects could be reproduced by a human being using normal physical means. But there are other phenomena which imply microscopic effects on matter, which appear to constitute breaches of the laws of nature because they would be impossible for a human being to reproduce normally. We shall call them phenomena of hyloclasty (from *ule*, matter, *klao*, break, subdue). Typical of these phenomena is the *apport*, that is, the penetration of an object into a closed space.

All the great teleplasts produced these phenomena. Of twelve apports observed by Crookes, he describes two which were particularly remarkable. The first occurred with Miss Fox. During a séance in the dining-room, a hand-bell which he had left in his library rang suddenly near his ears and sounded for five minutes in every part of the room before falling beside him. Miss Fox had been in no other room than the dining-room, the door of which was locked. A few minutes before, the bell had been standing on a book in the library, where Crookes had left it, and his youngest son had played with it while Crookes was receiving the medium.

The other occasion was with Home. A stem of Chinese grass 40 centimetres in length was drawn from a bunch by a luminous hand and passed through the table in full view of Crookes and his wife. Home's hands remained on the table. The stem had passed

¹ *Paper No. 7.*

through the crack, 3 millimetres wide, which separated the two halves of the table top. Its diameter was much greater than 3 millimetres and it did not show on subsequent examination 'the slightest sign of pressure or friction'.

Stanton Moses frequently produced apports. Dr Speer and his family often saw photographs, books and other objects brought into the room through closed doors from other rooms or from the upper floor. Pearls, precious stones and perfumes also appeared in an inexplicable manner.

In his study of Eusapia's phenomenology, Morselli notes in Article 29 'the sudden appearance, on the table or in the room, of objects come from a distance through doors and walls, such as flowers, branches, leaves, nails, coins, stones, etc.'¹.

208 *Sudden Disappearance of Objects*

Ochorowicz often observed with Stanislaw T. the disappearance and reappearance of objects, even when he was looking at them in full light. Lebedzinski states that when the subject felt too exhausted after making an object disappear, he could not make it 'return' and it was never seen again. Sometimes the object was returned to a place at a distance from the subject, indicated in advance by the experimenters. For example, a marked apple was found under a cushion, more than two metres from Stanislaw, who had not moved. With another subject, Stefka B., Lebedzinski and Roszolkowski carried out similar experiments in full light, but under the shelter of a black cylinder.²

Schrenck-Notzing, studying Stanislaw P. with rigorous control conditions, saw among the teleplastic formations of hands a branch of mimosa appear, 20 centimetres in length. The broken end exactly fitted a branch of mimosa in another part of the house, on the first floor where Stanislaw had never been. The subject would not have been able, in the conditions of the séance, to have concealed a blossoming stem on her person or elsewhere.³

In comparable conditions, during a séance for physical phenomena, Price saw a big branch of flowering lilac fall on the table. It was 40 centimetres in length, and was recognized as taken from a bunch on the floor above. The door was locked at the time.⁴

¹ 'Psicologia e Spiritismo', op. cit., 1908.

² *Ann. des sc. psych.*, 1912, p. 322.

³ 'Les phénomènes physiques de la médiumnité', op. cit., p. 148.

⁴ 'Stella C.', op. cit.

We must also mention Schwab's recent experiments with Maria Vollhart, a subject who could almost be regarded as a specialist in this type of phenomenon.¹ During séances various objects fell on the table. They were connected with the conversation (which eliminated the possibility of fraud) and they came from places either within the room or at distances up to 3 kilometres away from it. Branches of fresh box appeared in this way, branches of starwort up to 60 centimetres in length, hot stones, clods of earth, and so on. When an object was apported from another room, the dog which was in that room barked loudly. On another occasion a hoop, which had been in an adjacent room, came and encircled both the subject's arms and the left arm of one of the controllers who had not released the subject's hand. This last phenomenon is of the type which Zöllner studied with Slade and to explain which he proposed the theory of a fourth dimension of space.

209 *Zöllner's Experiments*

In 1877 the astronomer Zöllner carried out at Leipzig, with several colleagues including the physicists Weber and Fechner, a series of experiments with Slade.² Besides telekinetic phenomena, this subject affected a magnetic needle as we have already mentioned, and produced writing between slates and phenomena of hylolasty. There was for example an experiment in which knots were obtained in a string of which the two ends were fastened to a piece of wood. Four threads 148 centimetres long and 1 millimetre thick were prepared out of Slade's presence and the joined ends of each were sealed with wax. Zöllner selected one and put it round his neck, keeping the seal under observation. Without touching the thread *and in strong light*, Slade made four knots in it. Another experiment made use of flat leather laces, 5 or 10 centimetres in width, the ends of which were sealed to a wooden board. Zöllner covered them with his hands. Soon he felt a cold breeze and the leather laces moved under his fingers. Slade's hands, which were at a distance of 20 or 30 centimetres from the board, had not moved. After three minutes Zöllner took his hands away and found the laces had been knotted together in four places.

In another experiment Zöllner took two rings of wood and one of catgut, all three rings being made without a join. He threaded

¹ 'Teleplasma und Telekinese', op. cit.

² Zöllner, 'Die transzendente Physik', op. cit.

them on a violin string, the ends of which he knotted and sealed as before. A few minutes later a slight smell of burning was observed and the two wooden rings were heard rattling. They were found threaded on to the leg of a small table which stood near. They could not have been passed on to it normally, as this would have been prevented by the table-top at one end and by the three branches of the base at the other. In addition two loose knots had been formed in the string and the catgut ring was tied into them.

Zöllner also observed the disappearance and reappearance of objects. For example, a small table performing telekinetic evolutions in the room in full daylight disappeared from sight under the table. After five or six minutes it reappeared at a height of one and a half metres and fell abruptly. On other occasions Zöllner witnessed the disappearance and reappearance of a thermometer case, a piece of coal, and a book which returned to view falling from the ceiling. Slade's hands having never moved from their position on the table. Identical phenomena were observed by Ochorowicz and Lebiedzinski as well as by other experimenters.

210 *The Fourth Dimension*

Zöllner adopted the hypothesis of higher dimensions of space to explain these phenomena. This was based on Riemann's work on the mathematical theory of dimensionality.¹ The starting-point is the consideration of symmetrical figures of which the two halves are identical, but not superposable within the space they occupy. If drawings of a left and a right hand are made on a piece of paper they cannot be superposed in 2-dimensional space. One of the drawings has to be turned over, which involves passing it for a moment through a 3-dimensional space like that of our world. Similarly two objects which are symmetrical in 3 dimensions, such as our two hands, could be brought into coincidence by passing them through a 4-dimensional space. We are only talking about geometrical coincidence, of course. The physical organization of the hand might not lend itself to displacement in hyperspace.

We must emphasize that the perfect mathematical validity of hyperspace is not an argument in favour of its physical reality, but neither are 'realist' arguments able to disprove the possibility of the existence of a fourth dimension which may at certain moments be accessible to psychic subjects. Henri Poincaré gave a definitive

¹ *Ueber die Hypothesen welche der Geometrie zu Grunde liegen.*

statement of the position.¹ He was anticipated by Zöllner, to whom the appearance of knots in an endless string and the sudden disappearance of an object seemed to demonstrate the existence of a physical fourth dimension. In his attempts to prove this Zöllner took two snail shells of different sizes and opposite spirals, to see if the direction of the whorls could be reversed by a displacement in the fourth dimension. All that happened was that one of the shells was passed through the table top with its spiral unchanged.

Finally, in two excellent experiments, Slade succeeded without any contact in extracting coins enclosed in glued and sealed boxes. The coins passed not only through the box but also through the table and fell underneath it. In the second box the two small coins which it contained were replaced by two fragments of slate. In spite of the rigorously detailed accounts given by Zöllner and the other witnesses who were present, one would be inclined to regard these phenomena as conjuring tricks, if other observers had not described the same kind of occurrence.

211 *Other Phenomena of Hyloclasty*

The theory of a fourth dimension is less helpful in explaining some of the other hyloclastic phenomena. In the case of raps, for example, we have already seen the inadequacy of Crawford's theory, which ascribed them to friction or percussion on the surface of objects caused by various teleplastic formations. It is often observed that the raps do not sound superficial but deep, and they seem to suggest phenomena within the thickness of furniture or walls. For this we should have to accept a certain limited intra-molecular action.

The occurrence of some such action is rendered more probable by a study of phenomena in which objects are broken. The breaks may be similar to those that could be produced by normal means, but it sometimes happens, as with Slade,² Eusapia³ and most other physical mediums, that they do not show a bending or twisting effort, but effects localized in distinct centres. A recent and well-controlled example occurred when Price was studying Stella. A three-legged table of which all the parts were firmly fastened together was broken into small pieces with loud noises, the medium

¹ *La Science et l'Hypothèse* and his other works on the philosophy of science.

² Zöllner, *op. cit.*

³ *Ann. des sc. psych.*, 1907, p. 282.

having merely rested her fingers lightly upon it. One of the sitters said he felt force running over the table and accumulating at the points where fractures occurred. Price wrote, 'My personal impression was that a succession of electric discharges struck the table. It was an extraordinary sensation to feel a strong wooden structure cracking in this way. It was as if the table melted under my hands'.

Not only mechanical phenomena but also physico-chemical ones sometimes seem to occur on a molecular level. Home several times extracted perfume from flowers,¹ separated alcohol from brandy,² and diluted lemon essence. Stainton Moses produced perfumes either in the air or on his body. We may classify with these phenomena the transfer of coloured particles to Richer's finger, when he went through the motions of writing with it on white paper and Eusapia held a blue pencil in her hand,³ and the strange chemical phenomena produced by Stanislaw T. in the presence of Ochorowicz and Lebedzinski.

We could also regard as analogous phenomena the rapid growth of flowers from seed with Mme d'Espérance and Home's invulnerability to fire. The first appears to involve acceleration of organic processes, and the second cessation of thermal molecular agitation within a radius sufficient to protect the tissues. On various occasions and with many witnesses Home would take a glowing coal in his hand, give it to Lord Adare or Miss Douglas to hold, and place it in the hair of a sitter or under his arm⁴ without the slightest injury resulting. Other equally remarkable phenomena which have been observed from time to time, giving the impression that natural laws are suspended, may be included in this class of phenomena.

212 *Myers's Theory*

All these phenomena can be explained in the same terms, as Myers perceived.⁵ In the physical effects ascribed to spirits he distinguished three classes. The first was that in which mechanical force was increased and its point of application displaced. The second was that in which control was exerted on individual molecules of matter, as in suspension of the normal thermal laws and the condensation and disintegration of matter. The third was that in which influence

¹ Adare, 'Experiences in Spiritualism with D. D. Home', op. cit., pp. 136 and 165.

² Ibid., p. 148.

⁴ Adare, op. cit., pp. 135 and 239.

³ 'Traité de métapsychique', op. cit., p. 175.

⁵ *Human Personality*, II, p. 505.

was exerted on etheric phenomena (light, electricity, gravitation and cohesion).

The second class corresponds to the type of phenomenon which we have called *hyloclastic*. Influenced by the ideas of the physicist Clark Maxwell, Myers observed that in view of the molecular structure of bodies, our knowledge of things is a statistical knowledge; we have no power to act on individual molecules. If we were small enough to act on the molecular level we could change certain natural laws, such as those of the expansion of gases and of the diffusion of heat. Maxwell imagined a being of molecular dimensions who could thus make phenomena reversible and, for example, separate by physical means two mixed gases, separate alcohol from water, or make one end of an iron bar, which was originally at a uniform temperature, hotter than the other. These phenomena were not impossible in themselves; they were only so by virtue of our size and that of our tools. Psychical research restores this ability to man. Maxwell's demon could produce all the phenomena of Home or Stainton Moses: extract the perfume from a flower, cool the surface of a glowing coal, and so on.

Could a coin be made to pass through a board or a body be made to disappear? 'To suppose,' said Myers, 'that the special force of cohesion which we call solidity is the only one which cannot be overcome by powers of the kind in question does not seem to me a very plausible hypothesis. . . . To pass matter through matter may be a problem like that of the puzzles which consist of rings to be threaded together: there is plenty of space if you know where the chinks are. . . .'¹

213 *The Molecular Level*

This observation is correct. Although physicists have a fairly thorough understanding of the gaseous state, they know much less about the liquid state and are still almost ignorant of the state of amorphous solids, in spite of the progress made by the chemistry of ions. It has been established that matter occurs in a continuous scale of states. Above what is called the critical temperature no transition can be made from the gaseous to the liquid state. There are pasty solids (as there are soft crystals) which have low rigidity and high viscosity. The molecules of solids and liquids form complex connections; they become attached to nearby atoms using various

¹ *Ibid.*, p. 537.

forms of attraction. Energy is involved in changes of state. To make the molecules of a gram of ice at 0° Centigrade pass to the state of water vapour heat is needed of a quantity equal to the sum of the latent heats of fusion and vaporization, which is 675 calories. This amount of energy is well within the human range, although to raise a metal to melting point, for example, would require more energy. From a quantitative point of view the complete dissociation of the molecules of a piece of gold is not only possible, but easy. There remains the qualitative aspect, which is where we encounter the paranormal properly speaking. It is not normally possible to vaporize a piece of gold at normal temperature and pressure, and it is still less possible, when this has been done, to make the piece of gold return to its original form. This is where Maxwell's demon enters upon the scene. We may imagine him working on the molecular level, demolishing an object into its molecular bricks and rebuilding them elsewhere, like an American architect transporting a European church piecemeal to the New World.

Of course, Maxwell's demon is only a fiction, but a convenient one to remind the physicists that they have not yet reached the end of the possible forms of action in nature. We shall not attempt to explain the phenomena of hylolasty, but we must point out their relationship to the phenomena of ectoplasy. This invalidates the position of critics who accept the latter and express doubts about the former. Whether a subject dematerializes part of his own body or an external object, the phenomenon is basically the same. In both cases an intelligent influence is exerted on the molecular level.

CHAPTER VIII

TELEPLASTY

I. EXPERIMENTAL TELEPLASTY

214 *Characteristics of Teleplastic Phenomena*

If *telergy* is the objectivization of forces, *teleplasty*¹ is the objectivization of forms. In fact, of course, the study of telekinesis has shown that the forces are connected with forms, objects being displaced by anthropomorphic organs emerging from the teleplastic subject. Thus the greater part of telergy is only one chapter of teleplasty and we can now begin to see the subject in perspective. We have now to consider, not the extension of the normal organs to act on matter, but the objectivization of representations, especially in creating more or less faithful imitations of living human beings. These ephemeral materializations come and go with the rapidity of the thought which gives rise to them. They are usually incomplete, as if there were not enough matter to finish them. One sees fingers, hands or heads suspended in the air or emerging from an amorphous mass of ectoplasm. These forms show every degree of solidity from the transparent and impalpable phantom of the ghost stories to complete figures which seem as alive as ourselves. The latter kind of case is rare enough to justify a certain incredulity. The reality of these limiting cases is established more by the occurrence of all the intermediary forms under good control conditions than by the testimony of those who have actually observed the limiting cases themselves.

We shall begin with the study of experimental teleplasty, which will lead us naturally to the solution of an apparently complex

¹ The term *ectoplasy* was suggested by Myers in 1904. Richet coined the word *ectoplasm*. The Germans use *teleplasty*, which we shall use interchangeably with *ectoplasy*. The common root of all these neologisms is *plassein*, to model. *Plasis* means the action of modelling, *plasma* means the object modelled, and *plastis* the modeller. To avoid the use of the term 'medium' it would be better to use the words *ectoplast* or *teleplast* for a subject producing physical phenomena.

problem in spontaneous materializations. We shall examine the productions of various teleplasts to discover their characteristics. For reasons which have already been stated, séances are favoured by darkness, but may take place in light strong enough for observations to be made. The subject is usually seated in an armchair and controlled on both sides. He falls into a trance and at the end of some time forms appear near him. Usually a nebulosity is seen to emerge from his body. The cloud condenses and a hand, or body, or head is modelled from it, as if under the thumb of a mighty sculptor. A personality is born to whom the teleplast sometimes gives a name, if the phantom does not himself state his identity. As in mental metapsychics it is usually a question of a guide, an imaginary personality, or, even more frequently with spiritist mediums, a deceased person, whose features are reproduced with varying degrees of accuracy. When the body is completely formed it is usually dressed either in white veils like muslim or else like a normal person. It glides rather than walks. At the end of a few minutes or seconds it disappears to give place to another figure, until the teleplast awakens, unconscious of the beings to which he has given a fleeting life.

215 *Home's Phantoms*

Home was perhaps the greatest of all teleplasts in the power, variety and facility of his phenomena. However, he hardly ever produced more than misty phantoms, whose hands were often more solid and touched or moved physical objects. In Lord Adare's account¹ a case is recorded of a materialization seen at a distance, in which 'no one could have said which was the mortal and which the spirit'. On another occasion a witness felt the phantom of little Dannie, Home's godson, which placed itself on his foot. The weight of the phantom was that of a child of Dannie's age. In almost all other cases the phantoms were invisible or nearly so. They produced indistinct sounds.

When Crookes studied Home he made the same observations. In good light he saw hands which appeared and disappeared, struck his arm and pulled his coat. He saw 'a finger and thumb pulling petals from a flower in Home's buttonhole'. The hands did not always look solid and alive; often they became misty at the wrist and arm, where they were lost in a luminous cloud. Sometimes they felt

¹ Adare, 'Experiences . . . with D. D. Home', op. cit.

ice-cold and dead to the touch, sometimes warm and living. They shook his hand 'with the firm grasp of an old friend', but when he tried to retain them they dissolved in mist.

In his monograph in 1874 Crookes said he had seen complete figures on a few occasions with satisfactory control conditions. He described two cases. Towards the end of the day he once saw a dark and semi-transparent figure shaking the curtains of a window at a distance of two and a half yards from Home. The form vanished while he looked at it. On another occasion he saw a phantom, quite distinct from Home himself, glide into the room, take an accordion and play it. It approached one of the sitters who cried out, whereupon the phantom disappeared.

Stanton Moses, although he produced excellent telergic phenomena, was not a good teleplast. The forms he created were hardly visible except to himself.

216 *Eusapia's Incomplete Forms*

Eusapia generally produced incomplete human forms, especially hands. This corresponded to the phenomena desired, such as touching or displacement of objects. Touches were common. Sometimes they occurred behind the curtain of the dark cabinet, and sometimes the hands moved freely and gave an impression of life. If an attempt was made to seize them, 'they slipped out of one's grasp,' as Morselli said, 'as if they were made of semi-fluid substance'. At Carqueiranne Lodge was pinched and pushed and pulled by an invisible being; his hands was grasped by 'something like a human hand, which gave a clear impression of fingers with nails'. These hands were different from Eusapia's own. When they were visible, they were usually whitish in colour and of indefinite contours. It sometimes happened that these hands were attached to what were called 'supernumerary limbs', which were of a dark colour and emerged from the teleplast's body.

Eusapia also produced heads, usually behind the curtain, which could be felt. The invisible mouth seemed to wish to kiss or bite. At Milan Schiaparelli felt the living face of a man with rough bristly hair and a slender beard. Eusapia also produced unidentifiable shapes: globes, appendages, profiles and the 'dark, flat larvae which appear almost transparent and make strange gesticulations', which Morselli described. At Auteuil Mangin saw a series of busts like Chinese shadows. They were female torsos and the last of them

represented a young and pretty woman. They seemed to emerge from the medium, and when they had crossed two thirds of the table they leaned forward and vanished.

Complete figures were rare with Eusapia, as we have already said. Nevertheless, Visani once saw at Naples a rather vague figure of a very large man. The figure emitted red light, and gave every appearance of life. At Gênes in 1901 Morselli saw the figure of a child appear which resembled Porro's small daughter, and then another which was like Vassalo's son. At another séance two girls of an oriental type appeared. Maxwell also saw at l'Agnélas, quite near his face, a dark silhouette outlined on the wall of the room which was illuminated by light from a slit under the door. The silhouette was clearly defined at the top and became indistinct at the bottom.

217 *Eva's Productions*

Eva's teleplastic productions were less obviously utilitarian than those of Eusapia, and are of great theoretical interest. We must refer in particular to the study made of this medium by Schrenck-Notzing¹ and Mme Bisson² from 1909 onwards at Paris, Biarritz and Munich. The experimental conditions were most rigorous. Eva was completely examined physically before each séance and dressed in a seamless overall. Often she had herself undressed during the séance so that phenomena could be observed on her naked body. Lighting was provided by a number of red lamps. Sometimes the experimenters used electric torches to examine details more closely. Seven or eight cameras placed at various angles provided a mass of evidence which rendered the objectivity of the manifestations unassailable. After the séance the room and the medium were re-examined by the sitters as before. In the course of four years, during which two hundred highly sceptical people were invited to be present and control the medium, *not the slightest attempt at fraud was discovered*. To prevent any suspicion of regurgitation the medium was given bilberry preserve to eat over a long period. This would have stained red the regurgitated matter, but the ectoplasm, which was of the pasty type already described (183), was always white or grey in colour.

For two years Eva produced only shapeless materializations — at best rough sketches of hands and fingers. It was in September

¹ Schrenck-Notzing, *Materialisations Phänomene*, Reinhardt, Munich, 1914.

² J. Bisson, *Les phénomènes dits de matérialisation*, Alcan, Paris, 1914.

1911 that she began to produce figures and only at the end of the fourth year that she created a complete phantom. The hands produced by Eva, like those of Eusapia, were lifelike and touched or struck the sitters, grasped and pulled their hands. The arms were rarely formed. Usually they were like 'skeleton arms covered with substance'. It was as if the modelling force was insufficient and limited itself to indications. Thus, in the representation of a hand, one finger only might be modelled in detail while the finger-nails, thumb and index finger were flat like the fingers of a glove.

From the beginning of the séances in 1909 the apparitions of men's and women's heads were seen, but no photographic proof was obtained. They were quite distinct from the medium's head. A skull was seen on two occasions. Among the well-formed heads, Mme Bisson recognized those of her nephew and her husband, who were both dead. The heads of living people and strangers were also obtained. Many heads which were seen full face had only one eye; the other was hidden by the ectoplasm. The faces were often formed so fast that the magnesium flash was too late and the photograph showed only a confused heap of ectoplasm.

This speed of development was characteristic of all Eva's ectoplastic productions. Another characteristic was the way in which they changed in scale. A head the size of an orange would appear and slowly expand in all directions until it reached normal proportions. Sometimes the opposite occurred; the shape grew smaller without otherwise altering until it became imperceptible. This expansion or reduction occurred at the whim of the subject or of the intelligent force directing the phenomena, and was often produced in response to a suggestion by the sitters.

218 *Plane Materializations*

The main characteristic of Eva's ectoplasms was the frequent absence of a third dimension. The figures looked like portraits executed on a soft and pasty surface, or sometimes on a hard, flat surface like paper. When the surface was of the latter kind, tears and folds could sometimes be seen. This led to the accusation of fraud being made, with some justification. These wonderful materializations, said the sceptical, are nothing but pictures cut out and produced by the medium under cover of darkness at the séances. This allegation received much support from the study of one of the figures which, from a front view, looked like a pretty woman. A

photograph taken in profile by a camera inside the cabinet, however, showed the printed words 'LE MIRO'. The end of the second word, hidden by the medium's head, was evidently IR. The sceptics took this as a triumphant proof that the medium used illustrated papers, of which *Le Miroir* was one, as a source of pictures to cut out. The photograph in question was that of a Parisian actress named Monna Delza. Similarly, among the photographs published by Mme Bisson, pictures of Presidents Deschanel, Poincaré and Wilson, the King of Bulgaria, and Mmes Leconte and Faber were recognized. The resemblances were not absolute, but were certainly suggestive.

In a model piece of research Schrenck-Notzing demonstrated the authenticity of these strange formations.¹ He showed that the conditions of the experiment *completely* excluded the possibility of this kind of fraud. Besides, if Eva had wished to cheat, it would have been very clumsy to put a piece of the *Miroir* above her head where she knew the fraud could be revealed by a photograph. The minute by minute records of the evolution of the phenomena in the reports of the séances showed that the flat appearance of figures was only *one stage* in the development of a solid materialization. This was confirmed by the stereoscopic camera. Also, in the case of the figures of President Poincaré the beard was convincingly real. The face gave an impression of skin rather than paper, and broke up into lumps and tangles of substance.

Finally Schrenck-Notzing made a crucial test. He set up under normal séance conditions pictures cut out of illustrated papers, surrounded with muslim veils to simulate the observed phenomena. As he expected, the photographs obtained were grey and indistinct, in no way comparable with the original ones. They did not show the play of shadow, varying with the angle of lighting, which occurred with even the least solid-looking materializations. When the false photographs were examined with a magnifying-glass it was possible to see the texture of the printed photographs. Nothing of this kind could be seen on the real photographs. Nor could any sign be found of the re-touching which would have been necessary to make the published photographs look like the materializations. The statements of the experts were categorical on this point.

Another teleplast who gave artistic productions was the Italian

¹ Schrenck-Notzing, *Der Kampf um die Materialisations-phenomene, Eine Verteidigungsschrift*, Reinhardt, Munich, 1914.

Linda Gazzera, who was studied by Imoda,¹ Richet, Schrenck-Notzing and de Fontenay. Although the control used was not always irreproachable, most of the experimenters were certain that genuine phenomena were obtained. 'It is beyond doubt,' said Richet. Linda gave powerful telekinetic effects and phosphorescent gleams. But her speciality was teleplastic models surrounded by veiling — usually heads of good-looking women or doll-like heads of children. These materializations, like those of Eva, often looked flat and reminiscent of drawings or photographs. Imoda's numerous photographs showed shadows even with lighting from behind.

Fontenay, a photographic expert, described the photographs of the séances, regarded on their own, as 'most disturbing', although he was convinced, for many reasons, that no fraud could have occurred.² For one thing the subject could not have concealed such large pictures and produced them so rapidly with no sign of crumpling or folding. Unfortunately it was not observed whether these pseudo-drawings developed, as Eva's did. Fontenay suggested that they might be apports. It is perhaps more logical if the theory of fraud is rejected, to support Richet's opinion that 'nothing prevents us from accepting that ectoplasm provides models and not living beings. The materialization of a plaster bust or of a lithographic picture is not in itself more absurd than the materialization of a human head with blood, movements and thoughts'.³ We shall see that the subject is clarified and unified when regarded from this ideoplastic point of view.

219 *The Animals of Gouzyk and Klouski*

Gouzyk is a Polish teleplast who, like so many others, has committed venial frauds, but whose faculty is beyond doubt.⁴ I can myself assert this after the twenty-five séances which I have had with him,

¹ E. Imoda, *Fotografie di fantasmi*, Bocca, Turin, 1912.

² G. de Fontenay, *Les photographies et l'étude des phénomènes psychiques*, Gauthier-Villars, Paris, 1914.

³ Imoda, *op. cit.*, p. 16.

⁴ Cf. R. Sudre, *La lutte pour la métapsychique*, Leymarie, Paris, 1924. When he was examined at the Sorbonne in 1923 by Langevin, Rabaud, Meyerson, etc., who were *a priori* disbelievers in the phenomena, Gouzyk produced some telekinetic phenomena but was suspected of fraud, although this was not observed or even logically proved. In 1925 at Cracow he was accused of another attempt at fraud which was given much publicity. It was a case of the commonplace substitution of hands. Nevertheless, his accusers accepted the genuineness of his psychic faculties, as Schrenck-Notzing confirmed (*Psychische Studien*, VI, 925).

either at the Metapsychic Institute, at Warsaw, at my own home, or that of friends. The séances at the Metapsychic Institute, carried out by Geley in rigorous conditions (subject dressed in a special garment, sitters and subject chained together at the wrist, subject held at the wrist and restricted at the legs) produced telergic phenomena which were witnessed by thirty-five French and foreign observers. With Gouzyk displacements of objects and touches were always connected with materialized forms. At first these were human forms. At Warsaw, at a séance held with Schrenck-Notzing, Geley, Mackenzie and Neumann, I saw a pair of lights hovering in the air at a certain height. Then they stopped in front of me and became two eyes. Around the eyes the luminous shape of a face began to form and soon the head was clearly visible. Then we heard an indescribable hoarse voice saying three times in German, '*Guten Morgen!*' At the same séance I saw a small light settle on a locked piano and at my request three or four notes were struck. Several times, at the Paris séances, we were kissed by luminous and rather cold lips.

Gouzyk often materializes animal forms which are not seen, but can be heard and felt. Often there is a kind of little squirrel, which Osty once felt appearing on Gouzyk's side and which climbed about on some of the sitters' shoulders. There was also the dog which bit Dr Leclainche's legs, an enormous animal like a bear. I once felt its heavy body and rough coat at about the height of a man. It walked heavily, making the floor creak. At other séances I managed to make some light fall on a mirror behind Gouzyk's back without his knowing I had done so. I could see his head silhouetted against the slightly luminous background and was thus able to ascertain that he made no suspicious movements during the séance. In these conditions various telergic phenomena occurred, such as the lifting on to the table of a violoncello which was out of Gouzyk's reach. These phenomena corresponded with the passing of shadows, about the height of a standing man, across the field of the mirror.

Another great Polish teleplast to whom we shall return later, Franek Klouski, also produced animal forms of which photographs were obtained. A large eagle once materialized on his shoulder.¹ A kind of wild man of the woods was also seen, a hairy figure with a beard and a mane of hair. He made hoarse noises and let himself be

¹ G. Geley, '*L'ectoplasmie et la clairvoyance*', op. cit., p. 293.

touched. He even licked the hands and faces of sitters. He obeyed the thoughts of the subject, of whom he was evidently only a creation. Richet and Geley have been present when this animal, which they called a *pithecanthropus*, materialized, and they said he smelt like a wild animal. They have also felt something like a dog touching their legs.

220 *Willy's Grasping Appendages*

Willy's telergic phenomena were produced mainly by hands which were often seen and touched by sitters. Sometimes they looked and felt like normal hands, and at other times they were like leather gloves or inflated rubber ones. They were of variable volume; sometimes small like the hand of a woman or child, sometimes large and horny like a labourer's hand. Sometimes, again, the fingers did not materialize and one felt only a stump. They moved with remarkable speed and certainty of direction, but their actions were never continuous, depending on repeated efforts of the directing will.

Schrenck-Notzing made the important observation that teleplastic organs did not always take a human form. Sometimes the appendages resembled mutilated arms, paws of animals, claws, jelly-fish tentacles, puppet hands, forked branches, and so on. These appendages seem to be *ad hoc* creations, designed for the effort required of them. For example, to lift objects weighing four or six kilograms, a metre from the subject, some kind of limb is required with a rigidity equal to that of Miss Goligher's levers. Schrenck-Notzing observed that the production of a completely-formed and life-like human hand was a complex phenomenon and only rarely observed.

In addition Willy, like Eusapia, produced dark silhouettes like Chinese shadows. These silhouettes, which sometimes completely cut off the light, had rounded or angular contours like figures cut out of wood or rubber toys. Twice human profiles were recognized. The first had an ugly nose, a toothless mouth and a square chin. The second was in the cubist style. These moving caricatures were not flat, but three-dimensional. 'It is quite possible,' said Schrenck-Notzing, 'that these primitive constructions reveal the poverty of the medium's plastic imagination.'¹

¹ 'Les phénomènes physiques de la médiumnité', *op. cit.*, p. 212.

221 *Development of Teleplastic Forms*

As much to prove the authenticity of the phenomena as to point out a fundamental characteristic of teleplasty, we must emphasize the remarkable development of teleplastic forms which can take place sometimes in a very short time. We quote, for example, a description by Dr Gibier, head of the Pasteur Institute at New York, of phenomena produced by a remarkable subject, Mrs Salmon.¹ 'A white dot appeared on the floor, at the base of the cabinet. From where I was placed I saw that this object was about twenty-five centimetres from the door-curtain. Two or three seconds later it had become as large as an egg and was moving in a way reminiscent of the ping-pong balls which dance on top of jets of water at rifle-ranges. The object swiftly lengthened, becoming a column about a metre in height and ten centimetres in diameter. Then it grew to one and a half metres in height and two transversals appeared at its summit, giving it the shape of a capital T. The substance of it looked like snow or a thick cloud of water vapour. The two arms of the T moved and a sort of veiling grew out of them. The object enlarged further and took, vaguely at first and then distinctly, the whitish form of a veiled woman. Two white arms emerged from beneath the veil which they threw back. The veil disappeared and we saw a charming young girl of slender build who told us in a barely audible voice that her name was Lucy. . . .' She was wearing a white dress with her arms bare. She went up to a lady among the sitters, bent over her and breathed into her hands. At once a billow of tulle rose overhead and the apparition spread it over all the sitters.

Gibier, with two other people, rose 'when the girl, attracting to herself all the material spread over the knees of the sitters, collapsed at our feet like a house of cards just as I put out both my hands to touch her. She disappeared progressively as she had come, the process taking two seconds at the most. . . . When the last white spot was about to vanish on the carpet I bent down to touch it, but could feel nothing. It was no longer there. I went to the cabinet and put my hand on the bonds with which the medium was tied. I pulled at them, but they held firm. . . .'²

Here is a description by Richet of an analogous experience with

¹ P. Gibier, 'Recherches sur les matérialisations de fantômes, la pénétration de la matière et autres phénomènes psychiques', *Ann. des sc. psych.*, 1 and 2, 1901.

² *Ibid.*, p. 77.

Eva in 1906:¹ 'A white patch like a piece of cloth on the ground increased rapidly in size. Two horns were formed. . . . Then the X mass began to divide until it looked like a vaguely modelled hand. This hand moved, looking like the hand of a mummy emerging from a piece of material. It rose and fell like a hand. Marthe's hands, which I was holding firmly, were motionless. The tips of the ectoplasmic fingers, like elongated spindles, seemed to end in mist. I looked at them very closely. I touched a finger and it felt like a cold liquid. I pressed on it and felt a bone covered with skin. The hand rested on my knee and I felt the touch of a yielding body. Then the hand rose on its own upon the long stem which connected it to the ground. It fell back to the floor with a slight sound. It rested on the ground and I thought I could see the two bones of the fore-arm enveloped in something like a cloud of muslin'.

Geley also emphasized the way in which teleplastic forms develop and instantaneously disappear.² This last phenomenon has been observed by the sense of touch. The 'melting hand' has been described by a number of experimenters including Crookes with Florence Cook and Bottazzi with Eusapia. 'I clasped the hand which vanished in my grasp,' wrote the latter. 'I did not feel it shrink, but rather melt, dematerialize, dissolve.'³

222 *Complete Materializations*

The most famous case of complete materialization, that is, the relatively stable reproduction of a living human being, is that of Crookes and Katie King. We have already referred to this case in our historical survey. The great English scientist and the other sitters saw simultaneously 'in full electric light' Florence in trance and the apparition dressed in white. Varley ascertained that the medium did not move by placing her in circuit with a galvanometer. The temporary personality, Katie King, talked and walked about the room. When she disappeared, it was instantaneously. Mrs Marryat, having illuminated the figure with three gas-burners, saw it disintegrate in a second. The features were obliterated starting at the head, and the limbs seemed to fall in pieces to the ground. There now remained only a bundle of white clothing and this also vanished. As we have already mentioned, the apparition cut a lock of her hair and pieces of her veil to give to sitters. The holes in

¹ 'Traité de métapsychique', op. cit., p. 658.

² 'L'ectoplasmie et la clairvoyance', op. cit.

³ Richet, *Traité de métapsychique*, p. 760.

the veil were immediately repaired and no sign of a cut could be found.

Similarly, Richet had with Eva at Algiers a complete materialization of a self-styled Egyptian princess named Phrygia who allowed him to cut off a piece of her hair. But the case which gave rise to the greatest controversy¹ was the materialization, on five or six occasions, of a tall, bearded figure dressed in burnous and Arab head-dress. His breathing was so life-like that Richet asked him to breathe into a glass of baryta water, and obtained the white precipitate characteristic of normal breath. Here again the process of materialization and dematerialization could be clearly observed. The materialization began with a white patch on the ground. This patch became rounded and formed a human head, which was soon followed by a body. The phantom dematerialized by subsiding suddenly with a clicking noise. The same phenomenon began again at another place. Of course there were no trap-doors (as certified by an architect) or trickery (as ascertained by preliminary examination of the medium and the séance-room).

Many other teleplasts have also given complete materializations. With Mrs Salmon enclosed in a cage, Gibier saw many of them at the same séance. On one occasion, for example, he saw two young girls, a small child, a middle-aged man, a little girl, and so on. Each of these figures remained for only a few seconds and seemed to be in a hurry to disappear in their turn.² Klouski produced admirable phenomena which were witnessed by Richet, de Gramont and Geley.³ The control conditions were perfect and the medium even allowed himself to be investigated completely naked in the Laboratory of the Metapsychic Institute. The figures obtained included that of a toothless and wrinkled old woman, a Polish army officer in uniform and military cap, a German officer also in uniform with a spiked helmet, etc. The 1924 séances⁴ were especially rich in complete teleplastic productions.⁵

¹ J. Maxwell, 'Les séances de la villa Carmen et leurs critiques', *Ann. des sc. psych.*, 4 and 5, 1906.

² Gibier, *op. cit.*, p. 69.

³ Geley, *op. cit.*, p. 214.

⁴ *Revue Métapsychique*, 1924, 5 and 6; and 1925, 1.

⁵ The experimenters state that these figures spoke and I have myself observed this with an incomplete form, but only a few words were spoken. It would be interesting to make a psychological analysis of their utterances. In this connection we recall the 'direct voice' phenomena which are given by certain mediums called 'trumpet mediums' without any apparent materialization of a body. Crawford described some of them with reservations.

223 *Prints and Mouldings*

For many years attempts had been made to obtain prints of teleplastic forms. Aksakof quotes a case dated 1867 in which clay, lampblack and flour were used.¹ Zöllner experimented with Slade.² He put a pot of flour under the table. After five minutes, while engaged in magnetic experiments, he felt his knee grasped by a strong hand and the pot was removed from under the table and deposited more than a metre away. The print of a hand was marked in white on Zöllner's trousers, and the perfect imprint of a hand was found in the flour. This hand was much larger than Slade's, whose hand showed not the slightest trace of flour. Eusapia gave many prints of fingers, palms, fists, feet and even faces (full face and profile) which, according to Morselli, bore a certain resemblance to an aged Eusapia. The séances at Naples and at Montfort l'Amaury were very successful in this respect.³ In one of the prints of a face the hairs were very finely reproduced and the eye appeared to have been open when the mould was made. The medium's face showed no trace of the plastic material. Chiaia even obtained the imprint of a tongue in the clay.

The use of a bath of paraffin enables moulds of teleplastic forms to be obtained as material proof of the phenomenon of dematerialization. The method was originated by Denton, who in 1875 obtained, with Mrs Hardy as subject, the first mould of materialized fingers. One of these, a thumb, was twice as large as Denton's own. The procedure was simple. At a short distance from the subject was placed a bucket filled with very hot water on which floated a layer of melted paraffin wax. The teleplastic hands dipped into the bath and their splashing could be heard. Then they brought to the medium or sitters the thin glove of wax inside which they dematerialized. From this glove a plaster cast could be made. Using this method, Geley obtained several remarkable moulds with Klouski. Rather to forestall criticism than to detect a fraud which would have been impossible in the conditions of the séances, he secretly added cholesterine to the paraffin bath and cholesterine was found in the wax of the moulds.⁴

¹ 'Animisme et Spiritisme', op. cit., p. 113.

² Zollner, op. cit., p. 48.

³ A. de Rochas, 'L'extériorisation de la motricité', op. cit., p. 392.

⁴ 'L'ectoplasmie et la clairvoyance', op. cit., p. 239.

Dr Mesnager of Versailles, a specialist in plastic techniques, criticizes the use of pure paraffin wax, which remains supple for some seconds after receiving the imprint. For irreproachable experiments, he recommends a mixture of paraffin and stearine which sets immediately.

Nine moulds were obtained at the first séances at the Metapsychic Institute, seven of hands, one of a foot, and one of the lower part of a face (lips and chin). The last was on the normal scale. The others were reduced by a quarter, although they showed all the characteristics of adult limbs. They show every detail of the skin and no anatomical difference can be found between them and moulds of real limbs. Between 1921 and 1922 at Warsaw Geley obtained some even finer examples with the hands interlocking or bent back. When examined by five moulders, of whom one was an expert, these moulds were certified as 'original moulds, not obtained from another mould'. The expert was surprised by the extreme thinness of the layer of wax which was nowhere a millimetre thick. He added, 'These moulds, on the evidence, would appear to have been made from living hands'. Endeavouring to understand how these living hands, coated up to the wrist, could have been withdrawn without breaking the fragile glove of paraffin wax, he concluded that there were only two possible methods. The glove could be cut and sealed together again or a cast from a previous mould, made of a substance soluble in water, could be dipped into the wax. After a minute examination he declared that *neither of these procedures could have been used*, and the craftsmen said they knew no way of reproducing such moulds.

224 *Margery's Fingerprints*

A teleplastic medium who provoked heated discussions in the United States for years, from 1923 to 1933, produced many moulds of hands in paraffin wax and dental wax.¹ This medium, known as Margery, was the wife of Dr Crandon, a well-known Boston surgeon. Margery's phenomena were ascribed to her deceased brother Walter who spoke through her mouth when she was in trance. They consisted of movements at a distance caused by materializations. The substance came from different parts of her body, chest, ear, nose, breast, and so on. After a nebulous stage it took the form of more or less well-developed hands which could be touched in red light. Many scientists were present at the séances, including

¹ The case of Margery fills three large volumes published by the American Society for Psychical Research (I, 1928, II and III, 1933) with many evidential photographs and all the reports of the séances. S. M. Bird, who was for a long period an officer of the A.S.P.R., read a paper to the Paris Conference in 1927 affirming the genuineness of Margery's phenomena.

McDougall, Driesch and Tillyard. At many séances the hands and feet of the medium were tied and the displacements of objects were still produced. The séance at which Dr Tillyard of the Royal Society was left alone with the medium and made her carry out his own experiments was very instructive.

This medium's most original phenomena occurred in 1932 when she produced prints of 'Walter's' hands and of those of various living persons, including Sir Oliver Lodge, showing the formation of the lines on the thumb. One of these prints was obtained inside a closed box. As a precaution against substitution pieces of copper wire and small crystals of copper sulphate were inserted in the plastic material. On other occasions Margery produced the mirror image of a complete hand, a right hand, for example, with the finger-prints of a left hand. The third of the volumes of the *Proceedings* of the American Society already referred to, which contains 200 pages of photographs and detailed descriptions of these experiments is of great interest.

225 *Photography and Scotography*

Attempts have been made for a long time to obtain irrefutable evidence of the objective reality of teleplastic forms by photographing them. Crookes took forty-four pictures of Katie King and her 'medium' using an electric arc or a magnesium flame for the exposure of about ten seconds, which was considered rather long at that time. Modern plates require exposures of only a fraction of a second and modern experimenters such as Ochorowicz, Schrenck-Notzing and Imoda have made considerable use of photography in their researches. Sometimes several cameras were used to obtain photographs of the phenomena from all angles, and sometimes a stereoscopic camera was used as well. The use of magnesium is inconvenient because, whether in the form of ribbon or of powder, its explosion is harmful to the subject, causing at once vibration of the air and a burst of strong light. Modern flash bulbs do not have these disadvantages (57).

Many subjects dislike photography, as did Willy, of whom Schrenck-Notzing managed to obtain only a few pictures. No attempt to photograph phenomena should be made without the agreement of the subject or of the secondary personalities which claim to be controlling him. This favour is obtained by persuasion and it must be left to the personalities to indicate the favourable

moment. Often, to stimulate them, it is left to them to carry out the operation by telekinetically setting off the magnesium apparatus.

Photography is a precious auxiliary in the study of teleplasty. But its technique is almost incompatible with the demands of psychic experimentation. We must hope that further developments in the field of physical radiations will enable us to use 'dark light' which, without damaging materializations, will give sufficiently accurate and durable pictures.

In normal photography, ectoplasm acts like ordinary matter and reflects rays of light. As we have seen, any light which it may itself emit is usually not actinic enough to produce an effect on photographic plates. This is also the case with the gleams of light which are sometimes produced at séances. Therefore it is necessary for the psychic fluid to be in a state sufficiently condensed to give a picture. Photographs of apparitions or of doubles invisible to the eye but revealed by a photograph taken in full daylight must be regarded with suspicion. As the expert photographer and psychical researcher de Fontenay showed,¹ nothing is easier than to produce such photographs unintentionally, either by double exposure or by faulty developing.

There are so many well-known ways of producing photographs fraudulently that no 'psychic' photograph can be accepted as genuine in the absence of detailed information about the conditions in which it was obtained. But there is a branch of 'psychic' photography which used to be called 'spirit photography' and is now called '*transcendent photography*', *thought photography*, *psychography* or *scotography*. This is directly related to teleplasty. We shall use the new term *scotography*, originated by Miss Scatcherd (from *skotos*, darkness, and *graphô*, I write) and suggested at the international Copenhagen Conference. For this kind of photography neither light nor a lens are indispensable. The plate is affected directly by the psychic fluid, which acts through material obstacles. On developing the plate various images are found, from spots, flaky effects or halations to 'prints' of hands and more or less recognizable portraits. There are even sometimes written messages.

226 Ochorowicz's '*Radiographs*'

Ochorowicz's experiments with Stanisława T. clarified and perhaps resolved the problem which had been somewhat obscured by the

¹ '*Les photographies et l'étude des phénomènes psychiques*', op. cit.

insufficiently-scientific researches of Baraduc and Darget.¹ While studying the action of the so-called X^x rays he had observed that they did not obey physical laws. This was particularly apparent in the capriciousness of their passing through opaque bodies, their photochemical effects, and the pictures produced by means of them. Trying to obtain 'radiographs of hands' he made a still more surprising discovery. When Stanislaw's hand was held over plates enveloped in black paper, more or less clear shadows of the fingers were obtained on developing. In 1911 he brought a plate near to the subject's ear to obtain a 'radiograph' of it, but obtained instead a print of his own hand. He thought that the light must have come from outside but could not explain how it happened that the positive image of the fingers was in white on a black background.

On another occasion he placed the plate on top of Stanislaw's head and obtained an image of part of her skull and two hairpins. In other experiments the plate was held at a distance from the body of the subject, who said she saw a 'fluidic hand' separate itself from her real hand and place itself on the plate. The picture produced was that of a hand with the fingers spread out. Sometimes there was only one enormous finger, or a hand much larger than that of the subject, or a smaller hand, or two hands. There were inconsistencies in the images. What should have been dark appeared light and *vice versa*; iridescence appeared on the sensitive plate; and the phenomena seemed in general closely linked to the subject's mental state, so much so that on one occasion an image of the moon was obtained instead of the expected impression of a hand.

The most instructive experiment was with a rolled photographic film which was placed in a bottle. Ochorowicz held the neck of the bottle throughout the experiment. A picture of a hand, larger than life, appeared on the film as if it had been radiographed on a flat surface. Stanislaw said she had first tried to dematerialize the glass but, failing, had made the 'double' of her hand pass through the narrow space between Ochorowicz's hand and the bottle neck. The experimenter then tried to obtain images on two plates fastened together one millimetre apart with the two gelatine surfaces facing. Two dissimilar pictures were obtained of a hand wearing a ring like the subject's. From a study of these pictures he deduced that the fluidic hand had flattened to less than a millimetre in thickness in

¹ Ochorowicz, 'Radiographies des mains', *Ann. des sc. psych.*, 1911, 10 to 12; 1912, 1.

order to slip between the two plates. He obtained other interesting phenomena, such as writing on a rolled film and a picture of a hand wearing a thimble on the middle finger. In this last experiment he had put the thimble on his finger and the subject had attempted to displace the 'astral body' of the thimble. The image of the thimble was very clear and its lighting was different from that of the fingers. Ochorowicz's later experiments led him to an ideoplastic view of these phenomena, but he was not bold enough to generalize it because he was still under the influence of the old belief in an 'etheric body' or 'double'.

227 *Scotographs of Hands and Faces*

On several occasions Eusapia produced a vague image of a hand by affecting a photographic plate wrapped in black paper. An important experiment was carried out by Professor Foa at the University of Turin.¹ He held a plate wrapped in black paper above the medium's head. A teleplastic hand tried for some seconds to take it from him. When it was developed the negative showed the black print of four fingers. He does not say whether these fingers showed any resemblance to those of Eusapia. A subject named Erto who was found guilty of serious fraud in 1924, but who is genuinely gifted, produced some good scotographs in satisfactory conditions at the Metapsychic Institute.² In the presence of Richet and Geley I developed plates enclosed in a sealed box which had not left the séance-room. We found on the negative two dark radiating spots as if the plate had been exposed to two small sources of light, as well as a distinct impression of a hand, light on a dark background. The wrinkles and markings of the skin were clearly shown.

I myself brought the case to another séance. It was made of sheet-iron, tied and sealed, and was never out of our sight. The positive image showed a luminous sloping band with straight edges on one side and nebulous on the other, a spot of light at the edge of the plate and black prints of the palm of a hand. Numerous other experiments were made by Geley and his collaborators.³ They obtained some curious results — spots, finger tracks and perfectly-clear hand prints. Expert examination showed that these prints were like Erto's natural prints. But the control conditions *absolutely*

¹ P. Foa, 'Séances avec Mme Palladino', *Ann. des sc. psych.*, 4, 1907.

² *Revue métapsychique*, 3, 1924.

³ *Ibid.*, 4, 1924.

excluded the possibility of fraud. These phenomena were genuine examples of scotography.

In spirit photography proper the subject makes someone pose before his apparatus and proceeds in the usual way. When the picture is developed it shows one or several 'spirit forms', usually known to the person photographed but unknown to the subject. Spirit photography has been developed mainly in England and America by Hudson, Buguet, Duguid, Boursnell, Wyllie and so on. It can be imagined to what fraud and swindling it gave rise. Dingwall made a critical study of it in his paper at the Warsaw Conference. He pointed out that the 'extras', as they are called, have vague features in which many likenesses could be seen. With Hope, who is at the present time the best of the English 'photographic mediums', only five per cent of the figures are recognized. This did not prevent Dingwall from believing that such phenomena may sometimes be authentic, for some have been obtained with strict control conditions. This was also the opinion of Price, who had a curious dispute with Hope.¹ This medium was tested by Crookes who obtained a message using his own plates.

But the most conclusive test seems to be that made by Dr Lindsay Johnson, a distinguished expert on criminology and also on conjuring. He brought his own photographic material, carried out all the operations himself, only used plates bearing his own signature and did not allow Hope to come near the apparatus. Of eight plates which were exposed, three showed an 'extra'. These were a round white light, a child's face partly concealing a second face, and a young man draped in white. In another experiment the medium merely placed his hands on a box containing unexposed plates, and two of the middle ones received an impression. One showed four heads of the same person, and the other a photograph which had appeared the day before. Johnson, himself a conjurer, certified the phenomena without reserve.² Hereward Carrington was also favourably impressed.³

An examination of the scotographies produced by Hope, Mrs Deane, and others, shows clearly that they are not photographs of external figures but real scotographies produced by flat materializa-

¹ See our analysis of the pamphlets by Price, Conan Doyle and Forthuny (*Revue Métapsychique*, 1923, p. 126).

² *Compte rendu du Congrès de Copenhague*, p. 343.

³ *Journ. of the A.S.P.R.*, 5, 1925.

tions formed inside the dark-room or a closed box, as in Ochorowicz's experiments. It is no longer possible to doubt that all these phenomena affecting sensitive surfaces are completely analogous. They are teleplastic and telergic phenomena with evident purposefulness and intelligence.

II. THE LAW OF IDEOPLASTY

228 *Teleplasty and Prosopopesis*

What are this intelligence and purposefulness? We have already shown when discussing telergy that the guiding intelligence of the phenomena was the intelligence of the subject, conscious or unconscious, and related to a dissociated layer of his personality. This is true in general, and *in physical metapsychics prosopopesis acts in exactly the same way as in mental metapsychics*. The trance and division of personality accompanying the different kinds of phenomena differ only in accordance with the individual differences of the subjects. But physical phenomena, which show a technical rather than speculative intelligence at work, complete the demonstration of the fact that their origin must be sought in the subject himself.

The transmission of the 'messages' which are supposed to come from the spirits of the dead provides a perfect illustration of this community of origin of the psychological and physical phenomena. The subject may transmit the messages in many ways: verbally, as if they were whispered or dictated to him; by speech or writing, as if the spirit had taken possession of his body; by raps on the furniture caused by unconscious muscular movements; by raps at a distance; by writing, using a teleplastic hand created for the purpose; or by the speech of a temporary being. We have discussed examples of each of these types. Different though they are, the phenomenon is exactly the same from a psychological point of view. Prosopopesis occurs, the message is ascribed to a separate personality, and metagnomy occurs as well when the message gives information which the subject could not normally know.

The extension of metagnomy in physical phenomena is astonishing. Handwriting may be produced in imitation of that of a deceased person, and his features — even his finger prints — may be reproduced although he was unknown to the subject. These appear to be completely different phenomena. But writing is only a psycho-motor phenomenon, and when a face is reconstructed there

is no need to ascribe it to anything else than a technical intelligence making use of visual impressions. And there has never been a teleplast who reconstructed perfectly the physical appearance of someone who was unknown to him.

Lombroso's recognition of one of Eusapia's few complete phantoms as his mother was based less on the perfection of the model than on two or three suggestive and characteristic features. We are dealing with information translated into a plastic form, not with a mysterious power of complete biological restoration. A teleplast is exactly comparable to a large-scale sculptor attempting to model someone from memory if he knew him, or from descriptions if he did not. The more detailed the descriptions the better the likeness, but the information at the teleplast's disposal is often incomplete. The teleplastic and metagnomic functions are independent up to a certain point and the phenomenon which results from a combination of the two is often defective. We shall accept as a law that, like prosopopesis, *metagnomy acts in exactly the same way in physical metapsychics as in mental metapsychics*.

229 *Examples of Great Teleplasts*

The analysis of a long series of phenomena produced by the same subject confirms this view and leads to the theory of ideoplasty. Home sometimes produced effects in the conscious (or semi-conscious) state, and sometimes when unconscious; but Lord Adare's account¹ shows that his prosopopesis was so naïve that it did not always convince the Ashley House circle. Home's own personality was transparent behind those of his 'spirits', with their interminable speeches, their moralizing religious phraseology, their constant concern to produce conclusive proof in the form of physical phenomena, and their equally constant proportion of failures.

His usual procedure was to announce the arrival of spirits, describe them, talk to them and report their replies. In this state he always spoke of himself in the third person. For example, he would say, 'Dan is going to wake up. Do not speak to him about what he has just said . . .'. Often again this anonymous personality became 'we' — that is, the spirits in general. On other occasions it represented one spirit in particular. Sometimes Home forgot that he was, consciously or unconsciously, playing a part, and spoke in the first

¹ Adare, 'Experiences in Spiritualism with D. D. Home', op. cit.

person. Home's physical phenomena were closely linked to mental phenomena, which confirmed that he was the centre and originator of both. He would pause in the middle of dictating a message for it to be continued by distant raps or by some other symbolic phenomenon. He would say sententiously on behalf of a spirit, 'Everything comes in its . . .', and an old clock which no longer went would be heard to strike some way away. During his physical phenomena he had flashes of clairvoyance, in the same way and with the same irregularity as mental mediums.

Home had no 'guide', but most teleplasts have one which is an ordinary secondary personality. Eusapia's guide was John, Katie King's father, which shows what an impression had been made on her by the story of Crookes's medium. This John looked after her and controlled the production of phenomena. He often materialized his hands, which were large and strong. His intellect was no different from Eusapia's own. But Eusapia also sometimes forgot John and produced physical phenomena in her own name.

Stanislawa T. had two habitual personalities, curiously related. One was Stasia (diminutive of Stanislawa), or 'the Second', who was an eight-year-old girl incarnated in her, and the other was 'Little Stasia' who was discarnate, and wandered in the phantom state. The 'Second' was the classical type of somnambulistic personality. It differed from the normal personality whose thoughts and acts it knew, although the reverse was not true. This personality was not suggestible. 'Little Stasia' was visible only to the 'Second', who acted as her medium in Ochorowicz's experiments. She claimed that her existence was connected with Stanislawa and with another young girl of the same age in England, whose name she would not give. When she came to France the English girl fell asleep. Stanislawa, Stasia and Little Stasia all produced physical phenomena, but the medium gradually became convinced by autosuggestion that only Little Stasia could produce them. In fact it was this personality which made possible Ochorowicz's best experiments. One day he succeeded in making her photograph herself, which provided a remarkable example of telergy combined with scotography.¹ One day when Little Stasia attempted fraud Ochorowicz scolded all three personalities and the two first ones indignantly made the guilty one vanish. Henceforward it was the Second who claimed that

¹ J. Ochorowicz, 'Un nouveau phénomène médiumnique', *Ann. des sc. psych.*, 1909, p. 193.

she produced all the phenomena.¹ Placing on one side its psychical characteristics, the case of Stanislawa is an ordinary case of prosopopesis.

230 *The Law of Ideoplasty*

When we studied prosopopesis we showed that its stability depended on dissociated physiological or emotional conditions which provided it with a sort of framework, but that each personality was connected with an idea (idea-force, in the sense used by Fouillée) which is of auto- or hetero-suggestive origin. The facts of teleplasty make it necessary to extend considerably the role of the idea in psychical research, and to formulate the concept of ideoplasty. This word was first suggested by Durand de Gros in 1860² to designate the principal characteristic of suggestibility, the impression of ideas on ground prepared by hypnosis.

Ochorowicz gave a new meaning to the word in 1884. He used *ideoplasty* to mean 'the physiological realization of an idea'.³ In this way he united all the forms of autosuggestion and spontaneous suggestion in which an idea gives rise to a sensation, a movement or a cessation of movement, as well as trophic phenomena which include the cases of stigmata which we shall discuss later. Ochorowicz was led by his work with Eusapia to recognize that ideoplasty was not limited to the subject's own body, but could 'realize, by externalizing, his own somnambulistic dreams or those suggested to him'. Observations of telergy and teleplasty confirm this generalization and we can state the law of metapsychic ideoplasty as follows: '*Metapsychic action on the external world, which takes effect by bringing energy into play or by materialization of various forms, originates in a conscious or subconscious representation or system of representations in the mind of the subject*'.

It will be observed that this is the same law as that which governs the normal activity of the individual, at least in intellectualist theories. According to Herbart's theory representations do not constitute the whole of psychological reality; an emotional or voluntary factor must be added. But it is indisputable that the technical activity of man is conditioned by intelligence and that his

¹ J. Ochorowicz, 'Nouvelle étude expérimentale sur la nature des rayons rigides et du courant médiumnique', *Ann. des sc. psych.*, 6-9, 1911, p. 162.

² Durand de Gros, *Cours théorique et pratique de bruidisme*, Baillière, Paris, 1860, p. 44.

³ Ochorowicz, 'De la suggestion mentale', *op. cit.*, p. 142.

conscious acts originate in a representation. As for unconscious acts, other than motor habits, it is seen from the study of personality changes that they also may be related to representations.

The law of ideoplasty, then, is only an expression of the identity of the way in which the mind acts normally and paranormally upon the external world. It is only the means that differ. When a normal person wishes to reach an object he stretches out his hand; a psychic subject, unable to use his hand, makes an additional hand which he can use as a temporary tool. The remarkable thing is that the idea of grasping with a hand makes this temporary tool assume the characteristics of a real hand. The importance of the law of ideoplasty is that it shows that a representation can be directly realized. This restores to the subjective idea the reality which is denied to it by systems of philosophy which regard it as an epiphenomenon.

231 *Ideoplastic Adaptation and Imitation*

If the subject's imagination is not too anthropomorphic or is influenced by the suggestions of the experimenter, or if the desired effect does not require too much effort or demands a better adapted tool, instead of a hand there may be formed a rod, lever, claw, thread or system of threads. There is no need for a materialized hand to produce raps; a kind of hammer will do. Similarly, to raise delicate objects networks of threads are sufficient, as in Ochorowicz's experiments with Stanislaw T. Sitters with certain teleplasts feel themselves touched by a stump which does not seem to be either human or animal, but which successfully produces the effect subconsciously desired by the subject. When it is necessary to pass round obstacles or through cracks, suitably adapted forms are needed. In writing which appears between slates, for example, the hand which writes is flattened — it is not even a hand, but an organ of the required shape.

Imitation, either spontaneous or suggested, plays in ideoplastic phenomena the same role that it plays in normal psychology. It was while attempting to imitate the sparks of an electrostatic machine that Eusapia produced the lights which were observed at the Psychological Institute. On another occasion Richet held in his hand for twenty-nine seconds the materialized hand of John which was much larger than that of Eusapia, who was in any case under control. He asked for a ring and the hand made him feel that it had one. Again, he asked for a bracelet and felt on his wrist 'a woman's

bracelet consisting of two pieces hinged together'.¹ At Choisy-Yvrac Gramont saw a black hand holding an object shaped like a pair of bellows; at the same time Eusapia blew air out of her mouth.² Lebedzinski obtained a luminous model of an electric light bulb on Stanislaw's chest. The shape of the filament and bulb could be seen against the light bodice of the medium. She also imitated the flashes of a small electric torch which Ochorowicz had given her.³

One day Schrenck-Notzing showed Stanislaw T. a photograph of Eva which had just been sent to him from Paris, showing two materialized fingers lying in the medium's hair. That very evening Stanislaw imitated the phenomenon.⁴ The suggestive influence of the experimenter may be purely mental. It is certain that Crawford's ectoplasmic levers, stripped of anthropomorphism and reduced to essentials, were suggested by his mechanically trained mind. In the same way the evolution of Ochorowicz's ideas can be traced in the interesting phenomena of Stanislaw. His X^s and rigid rays were nothing but temporarily realized hypotheses. We have already observed that this vicious circle is a fundamental problem of psychical research.

232 *Artistic Ideoplasty*

It is not excessively daring to suggest that the pasty ectoplasm produced by Eva was an ideoplastic imitation of the clay used by Mme Bisson, who was a sculptress. The continuous modelling of her productions as they emerged from a shapeless mass was curiously similar to the process of roughing out a clay model. Eva's phenomena during the period in which she was studied by Mme Bisson and Schrenck-Notzing strongly suggest such a comparison. The famous flat materializations, representing topical personalities, were clearly ideoplastic. Eva was a great reader of illustrated papers, where she found the models for her productions. It was ascertained, for example, that the portrait of Mr Wilson had appeared in *le Miroir* on November 17, 1912, or ten days before the séance. That of M. Poincaré appeared on April 21st and was reproduced by Eva on March 6th and again on May 2, 1913. The resemblance on the second occasion was more vague but retained

¹ *Traité de métapsychique*, p. 634.

² A. de Rochas, 'L'extériorisation de la motricité', op. cit., p. 371.

³ 'Un nouveau phénomène médiumnique', op. cit., p. 236.

⁴ 'Les phénomènes physiques de la médiumnité', op. cit., p. 164.

characteristic details such as his tie and warts. There was another materialization resembling Leonardo da Vinci's famous painting, the *Mona Lisa*. This had just been stolen from the Louvre and photographs of it had appeared in all the papers. While studying such phenomena Schrenck-Notzing remembered that an engineer named Mac-Aba had already obtained from a subject an ideoplastic copy of one of Raphael's pictures. Thus phenomena which had been regarded as fraudulent by the uninitiated were seen to be, on the contrary, a striking proof of teleplastic creation.

Linda Gazzera's productions had an aesthetic character which could be ascribed to her excellent education and her taste for works of art. In Richet's presence she produced one day an angel's head of which the original was found by research in a painting by Rubens which had been admired by Linda. Recalling all that we have said about the dynamic state of these productions; their continuous modelling (which eliminates the possibility of fraud); and the occurrence of cryptomnesia, which is frequent in somnambulistic states, the ideoplastic hypothesis becomes evident. In the same way that with artists conscious and unconscious activity makes use of all the resources of memory to produce a literary, musical or sculptural creation, so with teleplasts a kind of artistic creation takes place with ectoplasm as its medium.

Besides, even when they have no particular artistic inclination, all teleplasts sometimes make use of symbolism. Thus, for example, Home one day materialized above his head a kind of ectoplasmic surface like a lace handkerchief on which a human head appeared. The whole was an exact reproduction of a vignette on the title-page of a poem by Adah Menken, who was supposed to be communicating through Home that evening. He agreed that it was an imitation.

At one of Mme Frondoni-Lacombe's séances at Lisbon¹ a phantom appeared which was not recognized and which, as if to emphasize its anonymity, showed instead of a face a death's head. Eusapia's pair of bellows was another symbol. We should also mention the teleplastic clamps which formed on Maria Vollhart's hand and bruised it when the séance was too long or the control too strict;² this was a naïve representation of the medium's discomfort.

Ochorowicz's 'radiographs of hands', and 'spirit photographs'

¹ Mme Frondoni-Lacombe, *Merveilleux phénomènes de l'au-delà*, Perin, Lisbonne.

² F. Schwab, 'Teleplasma und Telekinese', op. cit.

are clearly also ideoplastic phenomena. It is logical to conclude that all phenomena of materialization are caused in this way. The resemblance to deceased persons which may be shown by phantoms is due to the memories of the medium or sitters. It is a cryptomnesic or metagnomic phenomenon followed by externalization.

233 *Organic Stigmata*

The law of ideoplasty explains a class of phenomena which has long been recognized by psychiatrists, although they could not discover its true cause. These are, as Janet said in 1884, 'suggestions which seem to act not on the mind of the somnambulist, but on his body. All magnetizers and even all doctors have given examples of this influence of an idea on the body'.¹ Continuing the work of Charcot, Bernheim and Beaunis, Janet produced burns on his subjects by suggestion. With Léonie he produced marked reddening and swelling, and with Rose a real burn with a white blister and scab. The marks were produced at the place suggested and their form corresponded to the subject's ideas. When Janet placed an imaginary mustard-plaster on Rose's stomach, he observed that the reddened area was in the shape of a rectangle with the corners cut off. Rose explained that the corners of mustard plasters were always cut off. 'The preconceived idea of the shape of the mustard plaster determined the size and shape of the redness.'

Dumontpallier produced by suggestion localized rises in temperature of three or four degrees with sleeping hysterics. Beaunis succeeded in slowing the action of the heart and producing blisters. Bourru and Burot obtained blood sweated along lines of writing which they traced lightly on a subject's arm with a blunt point.

Crookes gives an account of a curious experience which he had with Mr Foster.² When he met him he wrote the names of deceased relatives and friends on pieces of paper. These were folded and rolled into balls before being placed in the subject's hands. 'He not only answered the questions we asked him about the date and cause of their deaths . . . but he also produced on his bare arm the names and dates correctly written in large red letters. The redness was produced by expansion of the small blood vessels under the skin and at the end of a few minutes it disappeared in the same way as a blush.'

¹ 'L'automatisme psychologique', op. cit., p. 165.

² 'Recherches sur le spiritualisme', op. cit., p. 96.

Ideoplasty also occurs during gestation. The possible effect of the desires and fears of pregnant women is not entirely a superstition. Liebeault tells the story of a woman who was deeply impressed by a wine-coloured mark which she had seen on someone's face and transmitted a similar mark to her child.¹ Du Prel summarized the chief facts about *noevi*, or birth marks, in a chapter of his strange work on *la Magie science naturelle*.² From this it can be seen how emotions can imprint images on the human body, even on the pupil of the eye.

This can also happen with animals. Count Prozor published an account, illustrated with photographs,³ of the case of a cat whose kittens were marked on the stomach with the date and stars printed on a sack on which their mother had lain. These cases are more common than might be supposed. We must also add the cases in which the idea does not express itself in a marking on the skin, but in a plastic modification. I saw at Sceaux a baby who was born with the same malformation (a shortened and contracted arm) as a cripple who lived in the same house.

Biologists find it difficult to explain those cases in which a child shows an indisputable likeness, not to his father, but to his mother's first husband. These are also examples of ideoplasty. We are now led to a problem more philosophical than biological, but which cannot be evaded by metapsychics and which has given rise to interesting theories.

234 *The Experiments with Mme Kahl*

A subject named Mme Olga Kahl, whose clairvoyant gifts became apparent early in life, was studied in 1927 at the Metapsychic Institute. At the age of nineteen she was deeply distressed and cutaneous stigmata appeared. Osty asked her to produce on her arm a word of which he was thinking. Almost at once a capital *R* appeared on her skin in red, and then a small *o* beside it. The subject was fatigued and said she could do no more. The word on which Osty had concentrated was *Rosa*.⁴ Further experiments took place in the presence of scientists, including Charles Richet. They were completely successful, although the subject was not told the names or signs to be reproduced. Either the experimenter concentrated on

¹ *Revue de l'Hypnotisme*, 8, 1891.

² K. Du Prel, *Die Magie als Naturwissenschaft*, Vol. 2, Altmann, Leipzig, 1899.

³ *Revue Métapsychique*, 1922, p. 34.

⁴ *Revue Métapsychique*, 1929, p. 127.

them mentally, or they were written on a folded slip of paper which was placed on Mme Kahl's forehead. Geometrical figures and even a drawing of a drinking glass were reproduced in this way. The inscription appeared usually on the arm but once on the chest. The time taken by the phenomenon was between thirty seconds and one minute.

Osty tried to trace back the physiological mechanisms used in dermography. The capillaries of the skin are controlled by the sympathetic nervous system under the influence of cerebral action. The selection of capillaries to give a picture is a kind of miracle unparalleled in normal physiology. No doubt it is in some such way that certain cures have been produced in abnormal states of trance, hypnosis, or profound exaltation. At Osty's suggestion Mme Kahl succeeded on one occasion in curing herself of a *coryza* and on another of influenza.

235 *Religious Stigmata*

Such experiments cannot be regarded separately from the sanguinolent stigmata produced by religious ecstasies under the influence of meditation on the Passion of Christ. Two remarkable cases were quoted by Myers.¹ One subject reproduced every Friday the wounds of Christ on his feet, hands and side, and besides this a cross and a heart marked on his chest, a cross on his forehead, and the letters I H S on his right shoulder. Rochas describes an analogous case in which the subject had psychic faculties.²

According to contemporary stories St Francis of Assisi was gifted with clairvoyance, and was levitated. In one of his ecstasies he saw that his hands and feet looked as if they were pierced with holes. In his right side he had a wound which did not heal. He died at the early age of forty-five, but not without giving further evidence of his paranormal faculties. At the end of the thirteenth century 300 cases of religious stigmata had already been recognized, many of them among the Dominicans. The majority of them were women. The following centuries produced many others.³ In the present century the case of Thérèse Neumann of Konnersreuth in the Palatinate has aroused much controversy. This is the case of a clairvoyant, blind girl whose stigmata bled on Good Friday and returned to a lesser degree every other Friday.⁴

¹ 'The subliminal consciousness', op. cit., p. 120.

² *Ann. des sc. psych.*, 1903, 1.

³ Cf. the study by C. De Vestme; *Revue Métapsychique*, 1930, 6, and 1931, 1.

⁴ Cf. *Personnages d'au-delà*, p. 208.

Pierre Janet was able to study one of his patients at the Salpêtrière over a period of twenty-two years.¹ She came to the hospital on account of her religious delirium and eccentricities in the time of Charcot. Madeleine had ecstasies in which she mimed the scenes of the Crucifixion. The next day the five wounds of Christ were to be seen on her hands, feet and chest. Janet verified by using various kinds of apparatus that these stigmata were not produced artificially. The phenomena continued to take place, even under an impermeable bandage.

236 *Geley's Theory*

Geley's theory first postulates the principle of the *unity of organic substance*.² Ectoplasm is a physiological extension of the subject; it is the subject himself, partly externalized. This externalized substance is undifferentiated; it is neither muscular, nor nervous, nor connective tissue, nor is it even a collection of cells; it is the primary substance which can organize itself into all the forms of life. Normal biology tells us that every organized being is built up from cells, but in certain cases a creature emerges from an amorphous medium. This happens when a caterpillar is turned into a butterfly. Inside its cocoon the chrysalis reduces itself to a kind of porridge in which no cellular arrangement remains. From this is made a creature possessing new physical and psychical characteristics. This natural metamorphosis is a genuine example of materialization in which the chrysalis plays the part of the subject, the phantom is the butterfly and the cocoon which protects the metamorphosis is the dark cabinet. In short, there are not two different kinds of physiology. 'Everything happens as if the physical body were made of a single primordial substance, from which organic formations are derived.'

To explain how this primordial substance gives rise to such an infinite variety of forms, we must admit the necessity of a *superior dynamism* which organizes, centralizes and directs. It is this that dissolves the chrysalis and constructs the butterfly; it is this that governs the development of the egg and organic repairs, and maintains the biological personality; it is this that differentiates tissues and adapts organs to their functions. But this dynamism is not blind like physico-chemical forces, it is conditioned by mind.

¹ Pierre Janet, *De l'angoisse à l'extase*, Alcan, Paris.

² G. Geley, *De l'inconscient au conscient*, Alcan, Paris, 1919.

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¹ Pierre Janet, *De l'angoisse à l'extase*, Alcan, Paris.
² G. Geley, *De l'inconscient au conscient*, Alcan, Paris, 1919.

Thus we return to the 'directing mind' which Claude Bernard placed at the apex of his physiology.

The directing idea is obvious in materializations, whether it comes from the subject or from some external personality. It is not always completely successful, either because it is weakened in transit or because it encounters obstacles; but normal biology also has its miscarriages and monstrosities. Geley compared Eva's unsuccessful figures with the strange productions of certain pregnancies. According to him the term *ideoplasty* must be made more general; he sees it as a universal law of nature. In both normal and abnormal organic productions 'mind is no longer dependent upon or produced by matter; on the contrary, it is mind which models matter, giving it its form and attributes'. Organic creations are 'representations' caused by a subconscious 'dynamo-psychism'. We may recognize under this new name Schopenhauer's 'Will' or Hartmann's 'Unconscious', but with this difference, required by Geley's moralism, that consciousness is regarded as the end of evolution rather than an accident of it.

237 *Are There Two Kinds of Physiology?*

Geley's theory is attractive at first sight, but there are many objections to it from a scientific point of view. They may be summarized in a quotation from Geley himself — 'Man is durable ectoplasm'. This comparison between teleplasty and ontogeny appears to me unjustified. We must not be deceived by the occasional but genuine occurrence of teleplastic individuals like Katie King, showing all the signs of life. *These phenomena are not at all biological.* The production of forms of life takes place in conditions which are not found in teleplasty. In the first place, life is essentially a cellular function. *Omnis cellula e cellula.* 'The cellular theory,' said Henneguy,¹ 'is even today the fundamental axiom of the biology of living things. This theory differs from many others in being completely straightforward; it is nothing but the expression of facts discovered by observation and experiment.' This does not refer to the facts of psychical research which reveal a new mode of the manifestation of life. Again, living things have clearly defined laws of evolution. Highly developed forms have a long heredity; they grow to the size and shape characteristic of their species, feed and reproduce, decline and die.

¹ *La vie cellulaire*, p. 10.

Teleplastic formations, which are for the most part misty phantoms, show none of these characteristics. They reach their final form at once without passing through any definite stages; they are unequally developed with some parts detailed and others formless, as if they were modelled from outside; and they show omissions incompatible with physiological functioning. Hands appear in space without a body which could circulate blood to them. It is true that these hands, and indeed all such forms, give an appearance of life, but it is no more. Wax figures appear real and would give an appearance of life if some ingenious artist could turn them into automata. *Teleplastic productions resemble such automata more closely than they do living creatures.* They have neither stability nor permanence and are visibly influenced by imagination. They are externalized dreams.

The falsity of the biological comparison is also shown by the fact that teleplastic formations imitate both the organic and the inorganic. Not only faces and limbs are produced, but clothes and draperies. At Warsaw in 1931 Geley claimed to have personally photographed, in a rigorously controlled séance with Klouski, a German officer in uniform, wearing a helmet with a bright point. This observation should be compared with that of Archdeacon Colley, who saw one of these metallic materializations soften and melt 'like snow' beneath his eyes, and then reconstruct itself. There was nothing physiological about Eva's models of material objects, nor about the levers which Crawford obtained with Miss Goligher.¹

238 *No 'Organic Substance'*

These last objections damage Geley's principle of the unity of organic substance. We have agreed that the matter of teleplastic forms, the ectoplasm, is mainly borrowed from the medium and probably also from the sitters. When it is released, this matter passes through a fluid state, of which the properties are completely unknown to us. This is what Geley called the 'fundamental organic substance', but we must call it simply substance, for in biology there is no organic substance. There is organized substance, that is, groups of chemical compounds engaged in the processes of life. If we accept that materializations take place solely at the expense of organized

¹ In the account of one of his last séances in 1924 with the same subject Geley wrote: 'I am struck by the insistence with which the personalities pointed out their clothing accessories (shawl, peaked cap, toque, or buttons on a uniform). The difficulty in interpreting these temporary creations of objects is well known. Doubtless I have much to learn about this subject'. (*Revue Métapsychique*, 1925, p. 30.)

substance, we must also accept that this substance undergoes complete molecular and atomic disintegration, before it can be used in teleplastic constructions which, as we have said, are not all of a biological kind. It is possible that the teleplastic process may draw on inanimate objects. 'Spirits' have often said that they could dematerialize objects. Statements by spirits must be regarded with caution, but the phenomena of hyloclasty show that this particular statement is not altogether unjustified. If metapsychic subjects can disintegrate inorganic as well as organic matter, they can make use of both in their temporary constructions. Perhaps they can make use of the gases of the atmosphere as an inexhaustible source of amorphous material. But this is pure speculation.

Geley identified his unique organic substance with ectoplasm, and believed it could also be recognized in a normal biological phenomenon — the metamorphosis of a caterpillar. Inside the cocoon the chrysalis was reduced to a kind of homogeneous ectoplasm which was reconstructed by a 'directing idea' into a new creature, a butterfly. Unfortunately the true state of affairs is not quite so simple, as zoologists pointed out to Geley. There is no reduction to a single substance. A normal phenomenon takes place in which certain parts of the chrysalis, in particular the digestive and locomotive apparatus, are digested.¹ These organs are turned into albuminoid substances which are absorbed by the cells of the adipose tissue, made assimilable and returned to the body cavity where they are used in constructing the new organs. This is a chemical reaction which occurs every day in the digestive processes of animals, in which the molecule of protein is broken down by ferments in order to form new combinations.

239 *The Occurrence of Mind*

There is no question in insect metamorphosis of a change in the directing plan, which would constitute an infraction of Virchow's principle: *Omnis cellula e cellula*. The new parts of the insect come from 'imaginal discs' which were already present in the body and could be seen under a microscope when the chrysalis dissolved. These discs are analogous to eggs. Similar evidence is found on examining all living creatures which change their form. Nature contains nothing analogous to psychic materializations and dematerializations, which is yet another proof that these phenomena

¹ See in particular Bouvier, *Histoire et métamorphose des insectes*, p. 282.

cannot be regarded as biological, although they sometimes show a close resemblance to the phenomena of life. They are imitations of life, *but these imitations show a creative power freed from the laws of duration, and therefore greatly superior to that which is shown in the phenomena of life.*

This power called mind is shown in psychical research without most of the limitations which are imposed by matter upon normal phenomena. Certainly biology shows us mind, but mind fettered to automatism. The most precise description which can be given of the world seems to be that of an amoral manicheanism, a struggle between mind on the one hand and matter on the other. Parapsychology shows us the mind temporarily released from the 'natural' physiological laws.

CHAPTER IX

SPONTANEOUS TELEPLASTY AND HAUNTS

240 *General Postulate*

All physical mediums produce phenomena spontaneously, by day or at night. These phenomena are sometimes very powerful and it is in this way that their faculty is noticed. Attempts are then made to cultivate it at regular séances. The phenomena which we are now going to discuss are of a spontaneous character but it is not evident that there is a subject producing them. For this reason, in many cases the objective nature of the happenings cannot be denied.

We shall accept as a postulate that *all phenomena can be related to a living subject*. This is in accordance with the results of experiment and with scientific logic. Thus, presented with any paranormal manifestation whatsoever we must ask who is the subject who has produced it. We adopted the same attitude in ascribing to a living clairvoyant subject the revelations which are regarded by spiritists as coming from discarnate spirits. Belief in the presence of the dead is excluded until it is proved.

Spontaneous phenomena form three groups which we shall discuss in order of increasing complexity: *thorybism*, *teleplasty with distant subject*, and *haunts*.

I. THORYBISM

241 *False Haunts*

The word *thorybism* is derived from *thorybos*, meaning noise or disturbance. Thorybistic phenomena are called *poltergeist* phenomena by German authors, the word meaning 'noisy spirit'. When their origin is unknown they are often confused with haunts. They consist of various noises, movements of furniture and objects, ringing of bells, falling water or stones, and so on. All these phenomena have a malicious or persecuting character. Many cases are

known in which the police and several witnesses were powerless to stop what they regarded as practical jokes. The phenomena stopped only when a young servant or a girl at the age of puberty was sent away from the 'haunted house'.¹

Without going farther back we may refer to the typical case of the Cideville vicarage (1851) which was reported in detail by J. E. de Mirville in Part I of his curious book *Pneumatologie*.² Two children, aged twelve and fourteen, had been brought up by the vicar in the vicarage. Suddenly the younger, influenced by a so-called magician, released what de Mirville describes as 'a violent squall' in the house. Raps sounded in the walls and it was soon found that they were intelligent, for they reproduced the cadence of any tune requested. Besides this 'panes of glass broke and fell in every direction; tables moved about and overturned; *chairs formed groups and hung in the air*; dogs were tossed to the ceiling; knives, brushes and breviaries flew out of one window and returned by the opposite one; *shovels and tongs left the hearth and entered the drawing-room on their own*, the flat-irons in the fire-place drew back and were pursued by the fire into the centre of the room; hammers flew violently through the air and then placed themselves on the floor as gently and slowly as feathers put down by a child; all the toilet articles suddenly left their shelf and immediately put themselves back; large desks knocked together and broke . . .

The whole village witnessed these facts. Statements were made and a Justice of the Peace gave a judgement. Public opinion held the magician responsible. He had been seen to emit behind him 'a kind of greyish column, perhaps of fluidic vapour'. The phenomena ended when the children were removed from the house.

242 *Stone-throwing, Ransacking and Pranks*

De Mirville quotes many other analogous cases which happened at the same period, including that of the Seeress of Prevorst, studied by Kerner;³ that of Angélique Cottin, the 'electric young girl', which interested Arago; and that in the Rue de Grès at Paris, which was particularly destructive. Stones of all sorts were thrown at the

¹ Cf. Andrew Lang, article in the *Encyclopaedia Britannica*, 1911; Sitwell, *Poltergeists*, Faber, London, 1940; Thurston, *Ghosts and Poltergeists*, Oates, 1953; Carrington and Fodor, *The Story of the Poltergeist Down the Centuries*, Rider, London, 1953; 330 unexplained cases are on record.

² *Des esprits et de leurs manifestations diverses*, I, Vrayet de Sucy, Paris, 1863.

³ Kerner, *La Voyante de Prevorst*, Chamuel, Paris, 1900.

house of a coal-merchant. There were pieces of paving-stone, demolition fragments and rubble. Several policemen and watch-dogs were put on guard, but in spite of day and night supervision the stone-throwing continued for three weeks. The doors and windows had to be protected or replaced by boards. The coal-merchant was injured and his furniture disorganized. One curious detail was that the mysterious stone-thrower used broken pieces of long, flat tiles to go through the slits in the barricades.

In 1900 at Turin Lombroso studied a very characteristic case in which objects moved and broke with the most disconcerting whimsicality. In the cellar, by the light of six candles, he saw bottles rolling and breaking at his feet. Others came from their racks as if carried by someone and fell down and broke on the ground. When Lombroso left the disturbances stopped at once. It was ascertained by a series of tests that the subconscious originator of all these paranormal happenings was a thirteen-year-old boy.¹

Sir William Barrett personally observed phenomena of this type during the last century.² The first time he visited the farm where the mysterious disturbances were occurring, everything stopped and started again as soon as he had left. When he had got to know the probable subject, a young woman of twenty, the phenomena occurred freely. Noises with no apparent cause came from all parts of the room and furniture. A large stone fell suddenly on to the bed. Barrett put his hands in his pockets and asked for as many raps to sound as he had fingers open, and he received correct responses. The manifestations were only ended by religious intervention. This must have corresponded to the subject's profound beliefs, for there are many other cases in which holy water and exorcisms have had no effect on 'disturbing spirits'. The devil has no connection with thorybism.

Schrenck-Notzing read to the Copenhagen Conference a detailed account, with the necessary verifications, of a pseudo-haunting at Hopfgarten, near Weimar.³ A neuropath, Frau Sauerbrey, hypnotized by her step-son, saw the phenomena begin as soon as he left. There were raps in the furniture and walls, and objects moved, especially during the night. There were many witnesses and police

¹ C. Lombroso, 'Hypnotisme et Spiritisme', op. cit.

² W. Barrett, *On the Threshold of the Unseen*. Cf. Camille Flammarion's collection: *Les maisons hantées*, Flammarion, Paris, 1923.

³ *Compte rendu du Congrès*, p. 187.

observations showed that the invalid could not be the cause of the phenomena as she never left her bed. Frau Sauerbrey ascribed all these manifestations to the malignant influence of her step-son. They stopped after a fortnight, when the family doctor persuaded the patient that she could free herself from the spell by an effort of will. This case is especially valuable on account of the quantity of objective observations made under police control.

243 *Thorybism and Psychoanalysis*

Psychological analysis sometimes throws light on cases of thorybism. I once had occasion to study a case which occurred in 1931 in a small township in l'Isère, near Vienna. An unassuming family had three children, including a daughter Marguerite aged thirteen and a half. The family had decided to bring up some small children, but as soon as the foster-children arrived mysterious accidents began to happen to them. They continually showed bleeding scratches and their removal was considered. Then the house became 'haunted'. The furniture moved. There was a great commotion on the first floor when all the family were together on the ground floor. Saucepans continually leapt from the stove, drawers were emptied and plates flew through the air and broke. An apparitional hand was seen seizing Marguerite's drinking glass.

We tried to explain to the parents the causes of the alarming phenomena. The young girl who originated them was quite unaware of it. The case was complicated by the story of an aunt who was a 'witch'. No very profound knowledge of psychoanalysis was needed to ascribe the unconscious cruelty to the jealousy of the child who saw two strange children enter her family and deprive her of her privileges.

This case should be compared with that of Eleonora Zugun, a Rumanian peasant girl who produced movements at a distance and apports. She was the victim of bites and scratches in parts of her body which her hand could not reach. She asserted that these phenomena were caused by a being which she called *Dracon*, which means dragon or devil. Psychological analysis showed that the injuries were punishments which the child unconsciously inflicted on herself for a sin which she could not confess. Her sense of guilt prevented the confession, but there were 'explosions' for which the devil was held responsible. The various telekinetic acts were expressions of remorse. Countess Wassilko of Vienna, who studied

Eleonora for two years, summarized the case in her paper at the Paris Conference.¹

II. SPONTANEOUS TELEPLASTY

244 *Phantoms of the Living*

We have already said that we do not accept as telepathic most of the phenomena classified as 'phantasms of the living' in Gurney's collection. He and his colleagues at the S.P.R. explained apparently objective phenomena as visual, auditory or sensory hallucinations resulting from a telepathic communication. The agent transmitted only an *idéa*, often vague, which was interpreted by the percipient's imagination and sometimes dramatized and externalized. The visual sense was usually concerned in the projection. Statistical analysis of the collection showed that there were 271 cases of apparitions with no auditory effect and eighty-five cases of purely auditory hallucinations without any visual effect. Gurney and his colleagues attributed this predominance of visual sensations to the greater ease in stimulating the nervous centres concerned. 'In any case,' they said, 'if the idea of a person is to be expressed in a sensory form, it is more natural that the idea should take a visual form rather than the auditory form of imagined or remembered words.'²

The authors were aware of the weaknesses of this hallucinatory theory and they supported it with lengthy discussions. One of the first difficulties is that the percipients are always, or almost always, normal people and have never had hallucinations. So the authors said that the percipients must be 'in a particular state which occurs very rarely'. But we know today that the particular state can only be one of hypnosis, intoxication or mental illness. It is true that a relatively large number of cases concern percipients in a state intermediate between waking and sleeping, but there are as many cases in which the percipients are fully awake.

Another difficulty is the considerable modification undergone by the telepathic impression in the mind of the percipient. This is not at all the case in experimental telepathy. What the agent transmits is not always what he intends but it is always part of what is in his mind. This is not at all the case with apparitions and the authors recognized that there was never externalization in experimental

¹ *Compte rendu*, p. 119.

² Podmore, *Telepathic Hallucinations*.

telepathy. They suggested that when the idea transmitted was accompanied by emotion, it had a tendency to become externalized.

This is a very debatable theory. In experimental telepathy it has been observed that emotion favours transmission, but not that it creates hallucinations. In spontaneous telepathy, on the other hand, there have been cases in which an emotion was transmitted without any accompanying hallucination, and there have also been alleged hallucinations which corresponded to events without emotional significance. We learn from psychology that certain hallucinatory states, rich in imagery, are accompanied by almost no emotional or motor reaction.¹

It is thus impossible to agree with the authors that 'a vague suggestion of telepathic origin may be a sufficient condition to produce a well-defined hallucination'. As for the percipient's supposed power in the waking state to elaborate this vague suggestion into a complex vision, it is difficult to accept this in cases in which the percipient is unimaginative or the event concerned has little interest for him. Why should this power, if it can extend to things outside the thoughts of the agent, limit itself in almost every case to producing an appearance of a single human figure? As we continue we shall see other objections arising to the hallucinatory theory of phantoms of the living.

245 *Sensory Hallucinations*

Taine regarded hallucination as the very fabric of mental life, so that perception was for him a 'true hallucination'.² A vivid representation can therefore give the impression of external reality. Even if this is so the theory of Gurney, Myers and Podmore is inadmissible, for a sane man has thousands of autonomic mental images which are more vivid than telepathic images but do not become turned into hallucinations. But Taine's theory is not correct. Bergson regarded the difference between perception and representation as one of kind, and not merely of degree. The objective differs from the subjective not only in the greater intensity of the image; there is always a qualitative difference, a kind of feeling of objectivity which accompanies perception and distinguishes it from representation. 'Sensation and perception,' said William James, 'in spite of their

¹ G. Dumas, *Traité de psychologie*, I, p. 518.

² Myers and other English writers call hallucinations with an external cause true or veridical hallucinations, as opposed to subjective hallucinations with internal causes.

Eleonora for two years, summarized the case in her paper at the Paris Conference.¹

II. SPONTANEOUS TELEPLASTY

244 *Phantoms of the Living*

We have already said that we do not accept as telepathic most of the phenomena classified as 'phantasms of the living' in Gurney's collection. He and his colleagues at the S.P.R. explained apparently objective phenomena as visual, auditory or sensory hallucinations resulting from a telepathic communication. The agent transmitted only an *idéa*, often vague, which was interpreted by the percipient's imagination and sometimes dramatized and externalized. The visual sense was usually concerned in the projection. Statistical analysis of the collection showed that there were 271 cases of apparitions with no auditory effect and eighty-five cases of purely auditory hallucinations without any visual effect. Gurney and his colleagues attributed this predominance of visual sensations to the greater ease in stimulating the nervous centres concerned. 'In any case,' they said, 'if the idea of a person is to be expressed in a sensory form, it is more natural that the idea should take a visual form rather than the auditory form of imagined or remembered words.'²

The authors were aware of the weaknesses of this hallucinatory theory and they supported it with lengthy discussions. One of the first difficulties is that the percipients are always, or almost always, normal people and have never had hallucinations. So the authors said that the percipients must be 'in a particular state which occurs very rarely'. But we know today that the particular state can only be one of hypnosis, intoxication or mental illness. It is true that a relatively large number of cases concern percipients in a state intermediate between waking and sleeping, but there are as many cases in which the percipients are fully awake.

Another difficulty is the considerable modification undergone by the telepathic impression in the mind of the percipient. This is not at all the case in experimental telepathy. What the agent transmits is not always what he intends but it is always part of what is in his mind. This is not at all the case with apparitions and the authors recognized that there was never externalization in experimental

¹ *Compte rendu*, p. 119.

² Podmore, *Telepathic Hallucinations*.

hallucinations, especially the visual ones, from their real perceptions, there is no reason to suppose that normal people, as witnesses of haunts generally are, can externalize images suggested by telepathy. Besides, the telepathic process does not make the idea transmitted 'descend from the higher centres of ideation to the sensory centres', as Myers, Gurney and Podmore said. Experimental telepathy shows us that the passage from the subconscious to the conscious always takes place in the same way in normal and paranormal psychology.

There are two final invincible objections which invalidate the hallucinatory theory. These are the presence of several witnesses in most cases, and the production of telergic phenomena which leave permanent traces.

The field of individual hallucinations is a narrow one, but that of collective hallucinations is even more so, and it has been maintained that it never occurred except in a hypnotic state. When several witnesses see the same phantom in conditions which exclude the possibility of verbal suggestion, the phenomenon is, on this hypothesis, an objective one. Many experiences of this kind have occurred spontaneously. Gurney, Myers and Podmore suggested two explanations — many percipients becoming aware of the same telepathic impression, or affecting each other contagiously. This first of the explanations eliminates the selective and monitory nature of the manifestations which is so important to spiritists. In fact, in many cases the hallucination has been shared by a person completely unknown to the agent.

On the other hand, it is very rare for persons closely connected with the agent to experience the same hallucination at the same time, which is opposed to the telepathic theory. But an even stronger argument against it is that the perceptions of different witnesses, which should differ according to the way in which each translates the telepathic impression, often appear to be in agreement as if the manifestation was localized in space. The simplest and most common case is that of two people in the same room of whom one sees a phantom and the other does not, because he has his back turned. As soon as he turns round he sees the same as his companion. We must also mention the cases in which the phantom is seen by children, or even by animals who show signs of fear. In all these cases the theory of psychic contagion is difficult to apply, and in any case its supporters only ascribed to it secondary importance.

Telergic phenomena of an undoubtedly objective nature some-

differences, both present objects vividly to us. But objects about which one thinks, which one imagines or remembers are relatively faint and without the striking and distinctive quality of actual presence which is possessed by the objects of sensations.' Semon thinks that the essential difference between sensations and images is in their localization in space. Barat, who summarizes the different points of view,¹ concludes that 'an image lacks the principal characteristics which justify our spontaneous certainty of the objectivity of sensations — intensity, regularity and stability'.

This can all be summarized by saying that the objective and subjective each have their specific and distinct characteristics. Thus a normal man in a normal state has no hallucinations. We cannot apply to him Esquirol's old definition: 'A man who has an intimate conviction of an actually perceived sensation when there is no exterior object present within the range of his senses to excite this sensation, is in an hallucinated state'.

Clinical psychologists even dispute the application of this definition to mental pathology. 'In most cases,' says G. Dumas,² 'the psychosensory hallucination occurs on a different level from that of true perception, and the patient may comment upon it and explain it in ways which emphasize or palliate its incomplete and abnormal elements.'

There are other non-pathological but abnormal states in which hallucination can occur without being confused with reality, but these are not fully-waking states. We have already mentioned these hypnopompic or hypnagogic images which occur in half-asleep states and have the appearance of objective reality (44). Similar images are seen by crystal gazers. They lack some of the characteristics of the objective, for the percipient is aware that they are only dreams set in a framework of normal perceptions. There remains the case of deep hypnosis in which the hypnotizer can create, by verbal suggestion, sensations of any kind of which the subject has no memory on waking. But in the case of phantoms of the living the percipients are not in a state of half-sleep. They never suspect that their hallucinations are not objective.

246 *The Objectivity of Apparitions*

Since most of the pathologically hallucinated distinguish their

¹ G. Dumas, *Traité de psychologie*, I, p. 519.

² Ibid., II, p. 892.

experiment, thought he glimpsed the figure of a woman and his attention was drawn in an unusual way to the bunch of keys.

It is possible for a subject to act on his own, without a hypnotizer. The Hindus assert that it is possible by certain procedures to externalize one's 'double'. This was also one of the main preoccupations of students of magic and witchcraft. A well-documented case is on record¹ in which M. F. Rose tried to project his double to visit one of his lady friends. He concentrated on the actions which he would make in going from his home to the lady's, entering the room and pressing the button of an electric bell. His friend was in bed with her daughter. They were both awakened with an inexplicable feeling of anxiety, and at the same moment a maid entered who had heard the bell ring. On a second attempt, the experimenter's apparition was seen as a luminous cloud which disappeared at an exclamation. The percipient's daughter, who was sleeping in another room, had heard footsteps crossing the corridor. Schrenck-Notzing also succeeded in making his phantom appear to one of his subjects.

At the Utrecht Conference Professor Hornell Hart quoted nine well-authenticated cases of extrasensory projection.

248 *'Bilocations'*

These phenomena of 'reciprocal hallucination' have long been known in religious tradition as 'bilocations'. There is, for example, the well-known case of Alphonse de Liguori who, while fasting in his cell at Arezzo, was seen near Pope Clement XIV at Rome. Some bilocations occur without the agent's knowledge and nothing distinguishes them from 'phantasms of the living' of the kind we have already discussed. Bozzano, who made a collection of cases of bilocation² drew special attention to certain interesting types, especially cases which occurred at death or during mortal illness. In perceptive bilocations he distinguished between those in which the consciousness of the agent appeared to remain in his body, and those in which it appeared to travel with the phantom.

This is not a very important distinction, for the former cases are uncommon and belong to the pathological type of 'specular hallucinations', or 'autoscopy' as Sollier called them.³ The subject

¹ *Journ. of S.P.R.*, Vol. 8, p. 250.

² E. Bozzano, *Considerazioni ed ipotesi sui fenomeni di bilocazione*, Luce e Ombra, Rome, 1911.

³ P. Sollier, 'Les phénomènes d'autoscopie', Alcan, Paris, 1903.

times occur in combination with fleeting visual and auditory impressions; objects are moved, doors open, cold breezes are felt. Myers regarded such cases as a difficulty, and he accepted that 'phantasms of the living' might occasionally be objective. He suggested that this modification of space did not occur on the material level, but in a 'metaetheric' medium. Spiritists today do not deny the physical nature of these phenomena, formerly regarded as telepathic, but they ascribe them to the presence of a 'medium'.

247 *'Reciprocal Hallucinations'*

In the cases described so far the agent is unaware of the phenomena he has produced. There is another type of case in which the agent, without necessarily having intended to produce the phenomenon, which sometimes occurs in his sleep, sees the percipient and his surroundings as if he were really present in his phantom. Gurney, Myers and Podmore called this class of phenomena 'reciprocal hallucinations' and found them difficult to explain. They suggest that *A* sends an idea telepathically to *P*, which *P* converts into a hallucination by dramatizing and externalizing it. In return *P* sends a complete moving picture of himself and his surroundings, which may last for a considerable time. 'We may suppose that *A*'s power of acting in a certain direction in an abnormal way implies the power of receiving an abnormal impression in the same direction or *vice versa*.¹ This is obviously a complicated hypothesis. On the other hand, reciprocal cases support the teleplastic hypothesis.

The class has many subdivisions. It includes somnambulistic 'travelling clairvoyance', which we have already discussed as an example of perceptive metagnomy (144), while admitting the possibility of a physical explanation. The physical explanation seems more probable when the travelling phantom was seen, or left in the place visited some physical evidence of his presence. Dr Backman of Kalmar gives a well-observed series of cases.² In the presence of several witnesses he 'sent' one day one of his subjects in a hypnotic state to visit the director of pilotage at Stockholm, 300 kilometres away. The subject gave a detailed description of the office which she had never seen, and the man seated in it. She described a bunch of keys which Backman ordered her to pick up. At this moment the director, who had no knowledge of the

¹ Podmore, *Telepathic Hallucinations*.

² Russel Wallace, 'Etude sur les apparitions', *Ann. des sc. psych.*, 3, 4, 6, 1891.

subject's sensitivity. With Rochas's best subject, Mme Lambert, this double was even photographed in profile.

Durville¹ and others continued Rochas's experiments and they obtained with the 'double' more and more curious results, which seem less and less convincing when one considers the power of mental suggestion on subjects in a hypnotic state. The experiments of Rochas himself on transference of sensitivity are not free from criticism. Tischner applied himself to reproducing the latter phenomenon in 1917-18.² He succeeded in obtaining the apparent transfer of hearing, feeling, taste and smell to a glass of water. To eliminate suggestion he took numbered glasses. Mistakes were made, especially when the glasses were in a neighbouring room. These phenomena are more likely to be examples of metagnomy, although this does not exclude the possibility of emission of psychic fluid and formation of a material phantom.

250 *The Illusion of the 'Astral Body'*

The facts of spontaneous teleplasty, observed from the earliest times, gave rise to a belief that the perishable material body possessed a much finer and incorruptible double, which the Egyptians called the *Ka* or double, the Greeks *eidolon* and the occultists the *astral body*. Modern spiritism has incorporated this belief into its dogmas. According to Delanne the astral body is the semi-material link between the body and the spirit. It can be separated from the former, but not from the latter. When separated 'it retains the form of the physical body . . . and cannot be modified by the conscious or subconscious will of the incarnate or discarnate'.³ When the incarnate or discarnate manifests spontaneously, it therefore appears in a form identical with its present or former physical body. If it is not identical this is due to the influence of the 'medium', from whom it has borrowed material to make itself visible.

This is the theory, both vague and naïve. It is hardly necessary to point out that it is at variance with the facts. It is not known why this astral body should make itself clothes of a substance similar to its own, why it should often reproduce features so badly, sometimes making a healthy man appear an invalid or rejuvenating an old one.

The question of the seat of sensitivity is also difficult. In the

¹ H. Durville, *Le fantôme des vivants*, Paris, 1909.

² R. Tischner, *Fernfühlen und Mesmerismus*, Bergmann, Munich, 1925.

³ G. Delanne, *Les apparitions matérialisées des vivants et des morts*, Vol. 2, Leymarie, Paris, 1911.

sees or feels his 'double' — a phantom exactly like himself. Sollier relates these phenomena to internal autoscapy, regarding them as kinaesthetic disturbances which take the form of a representation in the first type, and of a sensation in the second. From our point of view the first type may be metagnomic and the second teleplastic. But this requires that we review the problem of perceptive metagnomy, and we shall do so later while studying the philosophical aspects of metapsychic information (287).

Cases in which the phantom appears to convey consciousness and sensitivity are much more numerous. They have occurred in sleep, hypnosis and great physical crises. Before their 'travels' subjects have seemed to look at the inert body they had left, while they themselves were mobile and immaterial. There would be a temptation to cast doubt on such cases, in which the roles of agent and percipient become one, if they were not logically related to other types.

249 *The Exteriorization of Sensitivity*

Rochas's experiments on what he called 'the exteriorization of sensitivity'¹ belong to this chapter. Having put a subject into the state of *rapport*, in which all external perceptions were eliminated except for those indicated by the experimenter, Rochas observed that the sense of touch was also eliminated, or rather displaced to a distance of a few centimetres from the skin. Pricking or burning the air at that place caused pain to the subject. If the magnetization was continued a new sensitive layer appeared at a distance double that of the first, then a third, and so on up to a distance of two metres. The sensitivity of the layers decreased rapidly. Subjects described them as luminous strata.

Rochas thought that under the influence of the passes, the fluid emerged from all parts of the body according to two different rhythms and that the resulting interference produced these stationary layers of maximum vibratory motion, as in optics and acoustics. A plaster prism distorted the layers. If a glass of water was placed near the subject's body, the water, which contained the subject's sensitivity, could be charged with fluid. This suggested a justification for sympathetic magic, in connection with which Rochas made some curious experiments. By continuing the passes he succeeded in separating from the body the 'double' which contained all the

¹ Op. cit.

his face for her to recognize. The only image in his mind is that of his loved one and her surroundings.

To explain these contradictions Tyrrell suggests that the agent subconsciously dramatizes the idea to be transmitted, with the assistance of two metaphorical personalities — the producer and the stage-carpenter. They construct the scene to be transmitted as an *idea-pattern*. The same two personalities in the mind of the percipient may alter the drama to their taste.

It does not seem to me necessary to fall back on these ingenious theatrical analogies, which in any case fail to explain multiple percipency and the spatial peculiarities of certain well attested cases.

III. HAUNTS

252 *General Characteristics*

There has been no question of local influence in the phenomena of spontaneous teleplasty which we have so far discussed. In cases of thorybism, it is true, it may happen that the phenomena stop without the subject going away, if the persons concerned move to a new house, but this may be an effect of autosuggestion if the subject is convinced that the phenomena for which he is unconsciously responsible are caused by the place. The essential characteristic of a true haunt is that it is related to a place. These phenomena have been reported from the earliest times and are therefore classified as legendary. But their frequency of occurrence does not decrease, as might have been expected. Even in modern scientific civilization haunted houses and places are reported in all countries.

The phenomena of haunting are well known. First there is the phantom which, contrary to tradition, is not dressed in a white shroud but in the normal clothes it wore when alive. This form is usually intangible and passes through walls and closed doors. It pays no attention to the people present and seems to carry out some intention in an automatic way. However, it has been known for phantoms to notice people and to make gestures to them or reply to their questions. They evade all attempts to grasp them and disappear as they have come, dissolving into the air. Their presence is often felt before they are seen, and a cold breeze is felt on their approach. They may be accompanied by a glow of light. Sometimes the matter of which they are made decreases in density with time. Noises are

normal state, is it the double which feels, the body, or the spirit? The supporters of the astral body are driven to making academic distinctions, while others ingeniously add to the astral body one or more supplementary substrata — the odic body, the mental body, and so on. We shall be prevented from having recourse to such entities by the ideoplastic theory which we have studied, and which shows that all spontaneous or experimental materialized forms are subconsciously created by the subject.

We should observe in passing that prosopopesis, sometimes so difficult to disentangle in mental phenomena, is more obvious in physical ones. It is seldom that teleplasts create a phantom completely different from themselves. With almost all of them one feels that it is their own body which is reproduced, under the disguises in which it is dressed by their subliminal imagination. Spiritists themselves recognize this. In addition, teleplasts often forget that they are in a hypnoidal state resembling the waking state, and seem to produce the phenomena at will without ascribing them to a separate personality (John King). This often occurred with Eusapia and her sensitivity seemed to be conveyed in the teleplastic forms she made. When she made prints in clay she complained to Ochorowicz that it was hard and difficult to mark, and it was observed that the effigies which appeared in the clay all resembled her.

251 *Tyrrell's Theory*

G. N. M. Tyrrell, one of the Presidents of the S.P.R., sharing the dislike for physical phenomena shown by many of the British, regarded apparitions as psychological in origin.¹ An apparition is 'an idea received telepathically from an agent, which expresses itself by creating in the percipient's mind the appropriate sense data'. Thus the idea received creates a hallucination, in exactly the same way as if the agent was a hypnotizer producing an imaginary vision in the subject by suggestion. But we have already shown that a man in a normal state cannot be hallucinated. Further, the transmitted idea should contain all the descriptive details needed for a picture, unless it is a picture itself. In experimental telepathy there are certainly examples of transmission of pictures, but they are not hallucinatory, and they usually pass just as they are from agent to percipient. This is not at all the case in spontaneous telepathy. A man who is drowning and thinks of his wife does not try to transmit

¹ G. N. M. Tyrrell, *Apparitions*, Duckworth, London, 1943. Revised edition, 1953.

by a tragic event. A monk from the monastery had fled in a carriage with a young nun, but they were caught. The monk was beheaded and the nun walled up alive in the convent. Hence the phantoms of a coach, a headless man and a wandering woman. According to a second legend the nun had left the convent to follow one of the Waldegraves in 1667; she had been strangled by her husband and buried in the cellar. In 1927 her phantom was seen twice by a workman and disappeared suddenly on each occasion. The rector's daughter was another witness.

In 1928 a new rector, Eric Smith, was appointed to Borley, and as the manifestations continued, he appealed to Harry Price, the great English 'ghost-hunter'. Footsteps were heard in empty rooms, there were lights and inexplicable currents of air, bells rang and objects were moved. It resembled a case of thorybism, and may have been so if there was an undetected young subject. Price rented the house and appealed through the press for about forty men of good will to help him study the phenomena. These continued unabated. Professor Joad saw in full daylight an invisible pencil making marks on the wall. A dog barked continuously. A figure was seen on several occasions.

These phenomena forced the rector to leave in 1930. Price continued his investigations. In 1937 he rented the rectory and again appealed for courageous collaborators. The next year a message received by means of a planchette announced that the rectory would be destroyed by fire. This took place at midnight, one day in 1939, and witnesses saw phantoms in the flames. The ruins continued to be haunted until they were completely demolished in 1945. In the cellars some bones were found, which were supposed to be those of a young woman, and for which Price obtained a Christian burial. All these phenomena were incontestably genuine.¹

¹ The S.P.R. published in January, 1956 (Vol. 51, Part 186 of *Proc.*), under the names of three authors, Eric J. Dingwall, Kathleen M. Goldney and Trevor H. Hall, a long criticism of the BORLEY case in which they assert its fraudulent character. The S.P.R. took care to accept no responsibility for this evaluation, the incomplete and insulting character of which is regrettable. I knew Price for many years and never had the slightest occasion to doubt his honesty. Starting from complete incredulity based on his own skill as a conjurer, he arrived at an unshakeable conviction of the reality of psychic phenomena. As director of the National Laboratory of Psychical Research at London he rendered great services to the subject and his memory should not be sullied by such malicious allegations. The animosity which inspired them is the more incomprehensible that Price and Dingwall were friends for thirty years. In a vigorous reply, published in *Tomorrow* (Vol. 4, No. 2) Nandor Fodor called these attacks disgraceful and incredible.

also common phenomena. They are of all kinds: footsteps, creaks, raps in the walls, clanking noises, cries, sounds of weeping, laughter and songs. The tactile phenomena include light or heavy contacts, currents of air, and so on. Sometimes, also, smells occur which are related to a past event.

The phantoms of haunts are usually lacking in solidity, like those of spontaneous teleplasty, but some of them have assumed a very material appearance and cast a shadow, perhaps drawing energy from the witnesses. We are justified in assuming *a priori* that the same teleplastic phenomenon occurs in haunts as in other cases.

There are however differences which must be recognized.

The first is that phenomena of haunting are connected with a definite part of space, or at least with material objects.

The second is that they do not seem to need the presence of a subject. This would seem to contradict our definition of metapsychic phenomena, but before modifying the definition we shall have to examine the hypotheses of a distant or unknown subject.

The third is that they are persistent although not necessarily periodical, as the legends would suggest. Bozzano's analysis¹ showed that 374 cases of haunting included 7 periodical cases. Two of these merely coincided with the anniversary of the death of the person who had lived in the haunted place.

The fourth is that they are usually connected with a tragic event or a death. Bozzano's statistics showed that 304 of his cases, or eighty-one per cent, had this characteristic. In 180 of these cases the tragic event had happened at the haunted place, in 27 human remains had been found buried or walled up at the place, in 71 a death had occurred there, and in 26 the person who was supposed to produce the manifestations had lived there for a long time, although he had not died there.

253 *The Haunting of Borley Rectory*

A case which created a sensation throughout England before the war was that of Borley Rectory. Harry Price studied this case for ten years and about a hundred witnesses testified to phenomena.² This large old house in Essex was built in 1860 on the ruins of a thirteenth-century monastery. The Waldegrave family, who owned Borley, were Catholics. The haunt was said to have been originated

¹ Bozzano, *Les phénomènes de hantise*, Alcan, Paris, 1920.

² Harry Price, *The Most Haunted House in England*, London, 1940; *The End of Borley Rectory*, London, 1946.

by a tragic event. A monk from the monastery had fled in a carriage with a young nun, but they were caught. The monk was beheaded and the nun walled up alive in the convent. Hence the phantoms of a coach, a headless man and a wandering woman. According to a second legend the nun had left the convent to follow one of the Waldegraves in 1667; she had been strangled by her husband and buried in the cellar. In 1927 her phantom was seen twice by a workman and disappeared suddenly on each occasion. The rector's daughter was another witness.

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254 *Hallucinatory Theories*

Like apparitions of the living, from which they were not sufficiently distinguished, the phantoms and other phenomena of haunting were for a long time regarded as telepathic and hallucinatory phenomena. Podmore ascribed them to telepathy between the living.¹ According to him the haunt was caused by persons living or having lived in the house, or even by people who knew the place and thought with emotion of the tragic events which had occurred there. If this was so it was necessary to suppose that an agent could project the phantom of another person.

Myers opposed this hypothesis. He pointed out that in nearly all cases of telepathy between the living the apparition seen was that of the agent. Podmore's theory did not explain why the phantom of a third party should appear as the phantom of a deceased person; especially as one thinks more often of the living than the dead. Even if one thought only of the dead, there would be few houses not haunted on this theory. There would always be someone among the relatives or friends of a deceased person who would think of him with sufficient intensity to cause his phantom to be seen by the inhabitants of the house.

Thus Myers showed the absurdity of Podmore's theory. He did not accept Gurney's either, according to which the phantoms of the dead were *ante mortem* projections which had remained latent in the mind of the percipient. This may explain certain apparitions of the dead, but does not suit the cases of haunting which lasted for a period of years. Myers accepted survival so he had no difficulty in explaining apparitions of the dead by telepathic projection from their surviving minds. He even regarded *post mortem* telepathy as confirming the telepathic origin of apparitions of the living. Thus he established continuity between hypnotic suggestion, experimental telepathy, spontaneous telepathy by the living, apparitions at the moment of death and apparitions after death.² In all these classes of phenomena Myers supposed that the agent could produce in the percipient sensory hallucinations, emotions, motor impulses and ideas.

255 *Failure of These Theories*

Leaving aside for the moment the question of survival, we have

¹ Podmore and Myers, 'Phantasms of the Dead', *Proc. S.P.R.* Vol. 6, Part 16.

² 'Human Personality', *op. cit.*

already shown the inadequacy of the telepathic theories. Myers's mistake was to confuse phantoms of the living with haunts and not to recognize the local character which is typical of the latter. It is true that he distinguished between personal and local apparitions, 'the former impressing the minds of certain survivors, the latter becoming attached to definite places, often, it is true, also impressing survivors, but liable to degenerate into sounds and sights without any sign of intelligence or purpose'.

Myers was struck by these aimless, automatic hauntings. According to popular belief they were caused by ghosts which returned, under the influence of an obsession or of repentance, to the places where they had lived with no regard for the people who were living there now. Here the theory of intention fails and Myers was obliged to suggest the survival, not of a mind, but of a 'remnant of the force or energy engendered by an individual during his life'. This, in my opinion, expresses the essential nature of haunts.

Myers also found the multiple percipiency of certain cases difficult to explain on the hallucinatory and monitory theories. He did not conceal these difficulties from himself and made suggestions, such as that of the persistence of an individual residue, and of the 'metaetheric' objectivity of apparitions, which, if extended, would destroy his telepathic-survivalist theory.

In his monograph on haunts¹ Bozzano systematized Myers's theories. He distinguished between 'telepathic' or hallucinatory haunts, and 'mediumistic' or objective haunts. He asserts the continuity of telepathy *inter vivos* and *post mortem*. He emphasizes the selectivity of the phenomena as evidence of their purposiveness, but we have already seen that this characteristic is far from general. The only serious objection to the objective theory arises from the cases in which the phenomenon was perceived by only one witness, although several were present who would normally also have perceived it. In spite of Bozzano's statements, such cases are very rare and, without questioning their genuineness, they can always be explained otherwise than by selective hallucination; by hyperaesthesia or possession of psychic faculty by the percipient, for example, or by distraction, sleep or accidental blocking of the view of non-percipients.

¹ 'Les phénomènes de hantise', op. cit.

256 *Automatism in Hauntings*

The monitory theory usually held by spiritists fails more often in cases of haunting than in the other phenomena of spontaneous teleplasty, because of the frequently automatic nature of the manifestations. Studying the cases does not make the reader feel that they are 'means by which the dead attempt to attract the attention of the living'. The phenomena appear meaningless. The phantoms pass by like somnambulists, always going through the motions of the same actions without paying any attention to the persons present. This type of case corresponds to the tradition of 'ghosts' and has given rise to the spiritist theory of posthumous obsession.¹

This corresponds to an obsessional state in normal psychology. The field of consciousness is occupied by a combination of images of great emotional power which prevent the emergence of any other ideas. At the moment of death a mind may be dominated in this way by hatred, love, remorse, terror, greed and so on. According to the survivalists this obsession continues after death. The phantoms of the dead are drawn back to the places where they lived and repeat the actions suggested by their obsessions. Thus the victim of a murder or an accident appears with outstretched arms and a face contorted with horror; a murderer groans and implores forgiveness; a miser returns to count his gold, and so on. According to this tradition intervention by the living, prayers or masses, should end the haunting, but this does not always succeed.

Phantoms of the living sometimes show the same automatic character. Sidgwick investigated a case in which the apparition of a woman with reddish hair was seen on several occasions at different times in a doctor's house. Sometimes she was seated in the drawing-room, sometimes she was seen about to sit down at a dressing-table, undoing her hair. It was found by investigation that the apparition was that of the doctor's daughter-in-law, who had married his son in Australia and had never been to England. She explained later that she often concentrated mentally on imagining the house of her parents-in-law, and that she would then fall into absent-mindedness. By relating apparitions of the dead to analogous cases of apparitions of the living Myers not only rejected the idea of an appearance of a deceased personality, but accepted the possibility of the projection

¹ Carl Du Prel, *Die Magie als Naturwissenschaft*, II, p. 171, Altmann, Leipzig, 1920.

of a dissociated fragment of such a personality. Thus, the automatic nature of certain of these phenomena must be related to that shown in somnambulism and division of the personality.

257 *Local Influence*

But the primary characteristic of haunts is in their relation to memory. Analysing the case of the apparition of an old lady which was seen over a long period on the bed where she was murdered, Gurney pointed out not only the automatic nature of the phenomenon, but its likeness to a memory. He thought that the place on the part of the deceased person than that of a simple image impressed, we do not know how or on what, by the physical organism of that person and perceptible from time to time to other persons gifted with special sensitivity'.¹ Myers, commenting on these suggestions, also thought that the phantom could well be a form left by the agent while he was still alive.² This concession was serious for him, because it destroyed the universality of his two theories of telepathy and survival, ascribing to haunts two causes as profoundly different as they were difficult to distinguish.

The idea that a human or any living being can leave something of himself in a place is supported by numerous observations, ranging from the field of metagnomy to that of materializations. Many sensitive persons receive in a room a certain influence from those who have lived there before. They may experience their emotions, share their impulses (for example in houses where suicides have occurred), and even see the former inhabitants, either in a dream or in a hypnoidal state. Such sensitives may have auditory hallucinations; Andrew Lang quotes the case of Dante Gabriel Rossetti. The poet had stayed for several weeks in Scotland. After his departure he was still heard walking up and down his room reciting poetry, as he had been accustomed to do.³ Finally, there are cases in which sensitives perceive scenes in the same material setting in which they formerly occurred. Such was the strange 'Adventure' recorded by Miss Moberly and Miss Jourdain. While walking in the Trianon gardens at Versailles in 1901 they relived a

¹ Gurney and Myers, 'On apparitions occurring soon after death', *Proc., S.P.R.*, Vol. 5, Part 41, p. 517.

² 'Human Personality', *op. cit.*, p. 255.

³ *Occult Review*, March 1905.

scene which had occurred in 1789 and in which Queen Marie-Antoinette had been the main figure.¹ The accuracy of details they noticed was verified by reference to the archives of the period.

In most cases it is difficult to divide the subjective from the objective. Most subjects are unable to distinguish between a representation and a perception, but the observation of clearly-defined extreme cases enables us to recognize that it is sometimes a question of metagnomy and sometimes of teleplasty. We have already discussed this kind of metagnomy, calling it *tactile metagnomy*. The old theory of Buchanan and Denton could be extended to phenomena of haunting by regarding haunted places as saturated with human fluid. This impregnation would be caused by the emotional intensity of the emanation. As the Dentons said, 'Everything which increases the radiation of these influences, as for example a great sorrow, a great fear, a great joy or intense activity of any mental faculty, makes their primary and secondary results more effective'.² The scene of a murder which took place in a paroxysm of hatred and terror would be expected to have the strongest evocatory power.

The theory of psychic impregnation is supported by Luys's experiments in 'transfer'.³ When a magnetized crown was placed on the head of a patient with melancholic psychosis, a cure was obtained after five or six sittings. If the same crown was then placed on the head of a hysteric, the experimenter observed that the subject reproduced not only the symptoms of the former wearer, but all the characteristics of his personality. The crown had to be heated to a dull red heat to make it lose its strange properties. Although we must always allow for the possible effect of suggestion in this kind of experiment, the transfer phenomenon is very convincing.

258 *Criticisms of the Evocatory Theory*

The champions of spiritism have criticized the evocatory theory in

¹ E. Morison and F. Lamont, *An Adventure*, Macmillan, London, 1911. These pseudonyms concealed the names of Miss Moberly and Miss Jourdain, whose vision has given rise to works of considerable erudition discussing the veridicality of the places, costumes etc. at the time to which the event perceived probably belonged. Both had a reputation for clairvoyance from childhood. A very strange feature of the case is that the same 'adventure' was had by two young girls at the same place in 1928 although they had no knowledge of the previous vision. Cf. the papers by G. W. Lambert, *Journ. S.P.R.*, 1954 and 1955.

² W. and E. Denton, 'The Soul of Things', op. cit., I, p. 363.

³ *Comptes rendus de la Société de Biologie*, 1894.

a way which shows that they have much too narrow an idea of it. They reduce it, indeed, to the theory of psycho-physical recording of sensory images which was held by such early theorists as Buchanan and Denton. They cannot see beyond the 'astral doubles' of occultism and Gurney's 'veridical after-images'. But this is by no means the whole story and material objects are only used in clairvoyance to establish contact with the psychic system containing the memories of the persons concerned. But this system of memories is not like a record made on some completely passive substance, and it cannot be considered in isolation from the subject who obtains access to it. These considerations take away the force of the two objections to which Richet reduced all those of Bozzano, and which he considered irreducible.¹

The first of his objections was that there are phenomena of haunting in places which have no relation (at least apparent) with the original tragic event (a suicide or murder, for example) which seems to have given rise to the haunt. The second was that the apparitions show the working of personality which does not seem to be that of the sensitive, and still less can be ascribed to a material object. The evidence for this is the rhythmical periodicity sometimes shown by apparitions and their apparent purposiveness and occasional awareness of future events.

It is easy to answer the first objection by reference to Bozzano's statistics. Of the 304 cases he quotes, there is none which does not show a relationship between the person who is supposed to manifest and the place haunted. It is true that in twenty-six cases the person did not die in the haunted place, but had lived there a long time. Nowhere in the literature is there an example of Richet's theoretical case, in which a murder is committed in a place *A* and the haunt occurs in a place *B* unconnected with either the murderer or his victim. The whole question is whether the phenomenon can be related to some kind of influence exerted by a place.

As for the second objection, Richet replies to it himself a few pages later. He observes that all cases in which the ghost indicates what he wants or regrets an act committed when he was alive depend upon the testimony of a single observer and it is more reasonable to regard them as subjective illusions. 'The intentions attributed to apparitions depend on too imaginative an interpretation and too naïve an anthropomorphism to be relied upon.'²

² *Ibid.*, p. 733.

¹ 'Traité de métapsychique', op. cit., p. 723.

But supposing that these cases are genuine, we may find in them evidence of unconscious intervention by the subject in accordance with the usual laws of prosopopesis. Stimulated by the influence of the place, the subject reconstructs the personality of the deceased person and temporarily projects it. This often occurs when an object is given to a clairvoyant to hold. In Bozzano's cases the voices lent to phantoms in real cases of haunting are always subjective. As for the periodicity or rhythm of the appearances, this must be ascribed to the subject.

In short, the criticisms which have been made of the theory of local influence leave out of account the living subject, who is the principal architect of the haunt.

259 *Metapsychic Theory of Haunts*

We have now demonstrated as clearly as is possible without analysing all the types of case that *haunts are not telepathic phenomena*. The telepathic theory is a corollary of the spiritist doctrine, but it is not based on experience. Spiritists themselves recognize its inadequacy, for they are obliged to admit that many cases involve physical phenomena, others are due to the 'medium's' subconscious, others involve haunting by the living, while others can be ascribed to local influence. This multiplicity of secondary and collateral interpretations for phenomena of a single type would be an indication of fundamental weakness in the principal interpretation, if that interpretation were not directly belied by the facts.

A haunt is nearly always a teleplastic, and therefore objective, phenomenon; otherwise it is a metagnomic phenomenon with hallucinatory tendencies. In any case it is due to a psychic subject, under the influence of a place.

The postulate that a subject, near or distant, is always concerned in a haunt as in all other spontaneous phenomena is a valid inference from experience. We have seen that all other psychic phenomena take place in the presence of a subject or are clearly connected with one. There is no reason to suppose that a small class of phenomena is an exception to this law. This seems even less likely when it is considered that the phenomena are of the same kind as the others and appear to be related to experimental metagnomy and teleplasty.

Attempting to refute Podmore's hypothesis that haunts are caused by telepathic projections from living minds whose thoughts are concentrated on a place, and the hypothesis of local influence,

Bozzano pointed out that all houses should be haunted because there are few where someone has not died or on which the thoughts of some living persons are not focused. This is true, but it is a strong argument against the doctrine of survival. If this doctrine were true there should be no house unvisited by those who had left in it dear persons or objects. But in fact haunts are very rare. They are no less rare than psychic subjects themselves and this relation alone is enough to suggest that they may be connected with such subjects.

260 *The Influence of Suggestion*

But they may be even more rare, for the subject is not the only factor producing a haunt. Local influence may affect it, or even the mere suggestion that there is a haunt. If there is a tradition concerning the haunt, which is known to the subject, his imagination will be more easily stimulated by the place and the event connected with it. If the haunt is unknown to the subject the influence which affects him may be increased by the influence left by previous subjects.

We must emphasize this reinforcement of the original influence by its elaboration in the mind of another clairvoyant or teleplast. We recall Osty's observations when he placed in the hands of one of his subjects an object which had already been used to stimulate clairvoyance. If the first reading had been incorrect any subsequent ones were likely to be so, the subjects completely leaving the true facts to confirm and reinforce the fiction which one of them had given earlier. *The legend takes on a life of its own and becomes henceforward attached to the stimulating object.*

It appears to be the same with haunts, which develop in this way from the original event which gave rise to them. They become phantasmogenic centres with which persons gifted with psychic faculties come into contact. I believe that in the same way that it was possible to make Mrs Piper impersonate a fictitious deceased person, so it would be possible to create an artificial haunt in a place formerly free from it by suggestion and training of sensitives. The occurrence of 'haunting by the living' allows us to hope for an experimental solution of this problem.

PART FOUR
PHILOSOPHICAL PROBLEMS

CHAPTER X

THE SPIRITIST HYPOTHESIS

1. SPIRITISM

261 *Summary of the Doctrine*

Spiritism is a religion based on an unjustified interpretation of certain facts of psychical research. Like all religions, it teaches the survival of the soul. Its morality is that of Christianity: contempt for the pleasures of the senses, renunciation and charity. Its two original dogmas are those of communication with the dead and reincarnation. It holds that these facts have been established by experience, although a large number of spiritists, especially the English-speaking section (who call themselves, improperly, spiritualists) remain faithful to the Bible and refuse to subscribe to the Eastern belief in reincarnation. On the whole, spiritism is closer to Protestantism than to Catholicism. It believes neither in the Devil nor in Hell. It teaches that there are three elements in man: a material body which perishes at death; an etheric body or 'perispirit' which becomes more or less detached during sleep, hypnosis and trance, and which causes paranormal manifestations; and finally a perfectible and immortal spirit.

We have already mentioned the perispirit (250), the alleged controller of organic functions and receiver of sensations. It is also supposed to be the image of our intellectual and moral development; heavy and coarse with 'un-evolved' spirits, it becomes refined in the course of numerous incarnations until it envelopes a superior spirit. In its refined state it is less capable of influencing matter. Hence the belief that superior spirits never manifest themselves in séances for physical phenomena; they may communicate by automatic writing, or through coarser spirits who act as spokesmen. Spiritists, therefore, consider material manifestations as inferior, and seek primarily 'messages' which lend themselves more readily to edification. These messages are transmitted with the assistance of privileged

incarnate spirits. This is the origin of the word 'medium'. The medium is supposed to have the ability to make his perispirit and spirit leave his body momentarily, so as to place it at the disposal of deceased spirits who wish to communicate. When the body is free, it is at the mercy of the first spirit to arrive, and may be possessed by low spirits who always enjoy misleading the living. Hence the messages signed with famous names that are often received in spiritist circles. Allan Kardec recommends mediums to live with great purity and dignity so as to repel these unmannerly spirits. In addition, every medium has a spirit protector or 'guide' whose function is to carry out police activities. The guide also goes to fetch relations and friends in the Beyond from their occupations and places them in communication with the dear ones they have left on earth.

In the Beyond the spirit begins to expiate, primarily by remorse, the sins it committed on earth. Later it is again incarnated to expiate further, but in its new life it has no memory of past existences. Finally it perfects itself until it is judged worthy to remain in pure spiritual beatitude, and never again returns to earth.

262 *The Development of Spiritism*

Such is the religion which has thousands of adherents in the entire world, which owns temples and newspapers and whose success is due to the 'experimental proof' which it offers to all comers. Before discussing these proofs, it is perhaps useful to trace their evolution since the origins of spiritism. Since 1880, the criticisms of those rare men of science who have created psychical research have forced intelligent people increasingly to abandon dogmatic positions, and to admit the animist point of view which attributes to the medium a large part of the phenomena attributed to spirits.

At first, everything the medium said was accepted as a message from the Beyond, and three-quarters of the spiritists are still at this stage. Then it was admitted that there could be collaboration between the spirit and the medium, but without attempting to solve the problem of how two spirits could occupy the same body. Finally, it was recognized that the medium's communications might have nothing to do with any spirits, not even 'deceiving spirits'. Geley, an enlightened spiritist, went so far as to say that nine-tenths of communications are delusive, but he suggested no criterion for

distinguishing the remaining tenth, so that today all messages from the Beyond are regarded as suspect.

In Home's time only partial confidence was placed in the verbal dramatizations of the trance state, but if the messages were rapped out alphabetically at a distance, this was taken as a certain proof of their spirit origin. It was thought that these physical phenomena were so miraculous that they could only be produced by spirits. It was accepted that communication of thought could occur among the living, but as soon as the medium gave evidence of clairvoyance by revealing something which was known to nobody present, especially if it was in the future, people were convinced that this information could only come from the Beyond.

Modern spiritists have been forced to admit that clairvoyance, telegraphy and teleplasty can occur without intervention by the dead, and also that the spiritist phenomenon is always mingled with animism, that is, with elements borrowed from the subconscious minds of the living. Nevertheless some of them fall back on certain categories of phenomena which they declare inexplicable by metapsychic theory, or else they boldly rely on animism to prove spiritism without being able to divide the two. But those spiritists who are not blinded by fanaticism and who have sufficient scientific education abandon the attempt to find crucial proofs among the observed facts. They hope that their assumptions will be accepted as proofs, in view of 'the dramatic probabilities of nature' as William James called them. Like Myers and Geley they demand the act of faith necessary to construct a metapsychic system on the foundation of the other sciences, or even of moral principals. Thus the so-called 'scientific' spiritism inaugurated by Delanne seems to have become bankrupt and left the masses with only the old moral spiritism of Allan Kardec, which is quite a good thing in its way because it gives consoling illusions to the distressed, although it leads rather too many people into mental homes.¹

263 *Hartmann's Critique*

From 1880 onwards the study of somnambulism made it possible to oppose a purely psychological theory to that of spiritism. It was the German philosopher, Eduard von Hartmann, who stated the basis

¹ See the instructive book by Dr Philippe Encausse; *Sciences occultes et déséquilibre mental*, Payot, Paris, 1943.

of this theory most convincingly in 1885.¹ It was developed by several learned men: William James, Flournoy, Morselli, Richet, Boirac, Schrenck-Notzing, Oesterreich, Mackenzie. Hartmann's original statement contained many inaccuracies. He had not enough practical experience and merely assumed the reality of phenomena instead of asserting them. However, this was not of fundamental importance and we would excuse many of our contemporaries for adopting it if they brought to the discussion of the facts they assume the same profundity of thought as the philosopher of the Unconscious. Hartmann did not accept the objective reality of physical phenomena and suggested a hallucinatory theory, which has been recognized as false even by anti-spiritists. But he was right to point out that if these created forms are not the real bodies of the so-called spirits, but only images of those bodies, the question of their objectivity or subjectivity has no relevance to the theory of spiritism. The proof of this theory must be sought in the facts of mental metapsychics.

Hartmann explains the facts by relating them all to the 'somnambulist' consciousness, which he supposed to have the following properties. It functioned simultaneously with normal consciousness in the waking state and could be led by certain disturbances to create another personality. It amplified and strengthened the memory of waking experiences. It could enter into mental communication with other persons and employ the faculty of clairvoyance. 'If to these properties be added the sensory perceptions of the medium,' he said, 'they will be found sufficient to explain all the intellectual manifestations of spiritism.' Hartmann's successors may have perfected his theory and illustrated it by striking demonstrations, but have changed nothing essential in it.

Metapsychics was already considered as an extension of somnambulism and animal magnetism, and firmly based on prosopopesis, telepathy and metagnomy. Modern experiments added ideoplasty to these, which admirably completes Hartmann's psychological theory.

II. ANALYSIS OF THE EVIDENCE

264 *Tendency to Impersonate the Dead*

In my paper at the International Warsaw Conference, I enumerated

¹ E. von Hartmann, *Der Spiritismus*, Friedrich, Berlin, 1885. A postscript appeared in the *Psychische Studien*, 2, 1885.

about fifteen of the most convincing proofs which spiritists often produce to justify their belief. Three or four new items could be added to this list. As the facts are almost all known to the reader, we shall discuss their value as evidence.

The first point is the tendency of subjects at experimental séances to impersonate the dead. If the development of the subjects is studied from the time when the first signs of psychic faculty made their appearance it is easily seen that this tendency is caused by their spiritist education. There are few, perhaps none, of them who escape this influence. This was the conclusion Flournoy drew from his interesting enquiry in 1898 into the origin of psychic faculties.¹ Of seventy-two replies received, fifty-two came from sensitives and more or less gifted subjects. Some manifestly possessed the faculty from birth, but with them all the faculty became permanently established and developed in an orderly way after a conversation, séance or the reading of a book which constituted an initiation to spiritism. Popular superstition is aware of no other explanation for spontaneous phenomena than the manifestation of the dead, so that a spiritist interpretation is the most likely to be given of any particular phenomenon.

As soon as the idea that he is in communication with the departed has entered the subject's mind, it takes firm root there. Even if he comes to abandon his beliefs superficially (which is rare) his unconscious mind remains impregnated with the old ideas. All psychical researchers know by experience how difficult it is to discover a new subject. When they do find this rarity his clairvoyance is cultivated without relating it to the personalities of the dead. But usually the subjects one studies have been developed in spiritist surroundings, which are always eager to discover new mediums and train them according to the Kardecist method to make contact with the Beyond. The delusion is understandable, of course. If you take a pencil in your hand, what but a mind can move your arm? And what mind can it be, if not that of a loved one whom you mourn and whom you are sorry to have lost? Who would think of invoking a living person to communicate?

The influence of imitation is at its strongest in a field where practical action is not called for and where the power of ideas can achieve its most remarkable and immediate results. In the Middle Ages, under the influence of Catholic ideas, only demons were

¹ T. Flournoy, *"Esprits et médiums"*, op. cit.

impersonated,¹ or, at the other extreme, ecstasies were consecrated to God. These ideas were dominant until the era of animal magnetism, but they did not survive the eighteenth century with impunity and the magnetizers protested against the 'diabolic' and 'angelic' interpretations of the facts.² Neither did they incline to ascribe them to the dead. 'I see nothing in this,' wrote Deleuze, 'which requires for its explanation the intervention of any spiritual being other than the human mind. . . . Somnambulism is at once a heightening of the intellectual faculties and an extension and development of the sensitivity of the interior organs. In this state the mind becomes to a certain extent detached from matter and is able to receive sensations, ideas and information without the aid of the normal organs. It can even act directly on persons about whom it is thinking.'³

Deleuze and the other magnetizers did not think there was any contact between their somnambulists and invisible beings. They did not doubt the reality of spontaneous apparitions, but they regarded them as exceptional, in accordance with religious opinion, and thought no communication possible between the living and the dead. *This belief influenced their subjects who produce all kinds of psychic phenomena with a complete absence of spiritist characteristics.* When the somnambulists saw apparitions, they were always apparitions of the living, and so on. The change came in 1848 with the 'spiritual epidemic'. This created a new outlook and somnambulists became mediums. Spiritism is entirely a cultural product.

265 *Impersonations of Living and Fictitious Persons*

While attempting to make the disincarnate communicate, mediums sometimes make the incarnate communicate instead. Flournoy quotes four good cases of this kind.⁴ The departed who expressed their regrets on leaving this valley of tears and described the manner of their death were well and truly alive. The spiritists, who have an answer to everything, explained that they were 'deceiving spirits', but Flournoy's merciless analysis showed that they were only

¹ Sometimes these demons claimed to be the spirits of the damned. In the life of Saint François de Paule the following sentence occurs: 'Qui spiritus (malignus) . . . dixit se esse spiritum cujusdam mulieris quae erat mortua tempore bellorum Ducis Joannis . . . primumque fuerat meretrix et pessimae vitae'. (Acta Sanctorum, April and).

² J. Charpignon, 'Physiologie, médecine et métaphysique du magnétisme animal', op. cit., p. 393.

³ Deleuze, 'Histoire critique du magnétisme animal', op. cit., p. 407.

⁴ *Esprits et médiums*, p. 267.

dramatizations created by obvious emotional tendencies of the mediums.

We recall Soal's case of a living person presented as dead by Mrs Cooper. This confusion is not uncommon, so that even some spiritists have admitted that not all trance personalities are genuine. In the case of Mrs Piper, for example, they agree that Dr Phinuit, of whom no trace could be found in the records and who knew no more medicine than the medium herself, was a subconscious creation of the medium. But how are they to explain that personalities which they regard as genuine, such as 'Hodgson', took Dr Phinuit seriously, conversed with him and showed him the greatest respect? Does not this betray that these personalities also were arbitrary creations, although more convincing?

And this argument is reinforced when we see Mrs Piper, the greatest spiritist medium we have had, *treating as genuine dead people certain fictitious characters, created by the experimenters but to which she lent the same kind of existence as she did to her other personalities?* This is what happened in the case of the imaginary Bessie Beals, invented by Stanley Hall. The Hodgson personality was reluctant to accept the artificiality of this character.¹

Ochorowicz also originated a personality named Woytek with Stanislaw T. as the result of an involuntary suggestion. He remarked to Little Stasia that a certain piece of furniture was too heavy to lift and that it could only be done by a masculine spirit. He mentioned at random some names of Polish peasants: Bartek, Woytek. Thereupon the table announced that the spirit was called Woytek, and this proved to be the birth of a new personality which played a part in the séances for a long time. We have already seen that spiritist personifications are very suggestible, although at the same time sometimes very obstinate. Like children, they must not be directly opposed. By flattering them they can be made to do what one wants, because they are maintained in the subject's subconscious by their vanity.

266 *Proof of Identity*

The question of proof of spirit identity is a large and complex one. The spiritist place great emphasis on this point. Although disillusioned about the countless messages received from Aristotle,

¹ E. Sidgwick, 'A Contribution to the Study of the Psychology of Mrs Piper's Trance Phenomena', op. cit., p. 177.

Joan of Arc and Napoleon, they craved personal proof. 'In demonstrating identity,' said Lodge, 'the aim is not to obtain something noble but something convincing, and how could the persistence of memory be better demonstrated than by the memory of insignificant incidents which, for some personal reason, produced a lasting impression? . . . Wars and coronations are things about which we have read in newspapers; they are too well-known to be accepted as proofs of surviving identity; but a broken toy, a family joke, or a schoolboy adventure, have a personal flavour and are likely to return to memory even in old age or after a great upheaval.'

The communications of Mrs Piper and Mrs Leonard contained an abundance of such details, and it may be said that this is the case with all good clairvoyants. Among the small details which Raymond gave to establish his identity was the name of a stuffed turkey, known as 'Mr Jackson' to the Lodge family. Sometimes the information given was known only to the communicator, or at least was unknown to any of the sitters. This has sometimes enabled papers hidden during the communicator's lifetime to be found as a result of a dream or a message in automatic writing. The case of Swedenborg and Mme de Morteville is well known.¹ There are many instances in which the dead have 'returned' to impart information, pay debts, find lost wills, give advice, return property, and carry out other personal intentions of which the survivors had no knowledge. These cases are obviously related to metagnomy.

Cases are often quoted of communicators who were completely unknown to the medium and sitters and suddenly arrived and announced their identity in the middle of a séance. The metapsychic hypothesis explains these better than the spiritist hypothesis, which can see no sense in these untimely arrivals. In fact there is always a reason for them; usually a forgotten memory of the medium which makes an appearance with the dream-like mobility which psychological elements show in the dissociated state of trance. Alternatively, it may be an idea in the mind of one of the sitters which suddenly emerges. The assorted items of information in a newspaper are a mine of possibilities. If the medium has been moved by reading of a dramatic suicide it is quite likely that the dead man will return, a day or a year later, as a communicator. After the air tragedy in which Geley lost his life, in July 1924, all the spiritist circles in France and abroad were visited by him! The famous Abraham

¹ Aksakof, 'Animisme et spiritisme', *op. cit.*

Florentine case appears to have been due to cryptomnesia resulting from Stainton Moses' reading an announcement in the *Times*.

267 *Mimicry and Intimate Characteristics*

The personalities which communicate not only claim to be spirits of the dead, but they imitate their mannerisms and characteristics. In cases of haunting when the phantoms are not immediately recognized, the description given of them is found to be in agreement with the memories of those who knew them or with photographs. The phantoms of experimental materializations also give an impression which is sometimes confirmed by photographs. Dr Cushman of Washington sailed to England, where he was unknown. No sooner had he arrived when he visited Mrs Deane, the celebrated photographic medium in London. He posed before her camera and recognized the portrait of his dead child beside him on the photograph produced.

A medium, who may not have known the deceased person when he was alive, may assume his voice and gestures and reproduce his tricks of speech. He may also show on his own body the wound or disease from which the person died. Even at table-turning séances the table does not confine itself to rapping, but gives to the raps a character like that of the communicator. Soft raps are heard if he is calm, violent ones if he is angry. Aksakof was very impressed by this phenomenon when he heard his dead sister communicating.

The feeling of identity becomes irresistible when the apparition or communicator recognizes sitters. At one of Klouski's séances a phantom, looking like the sister of Count Potocki, kissed him, making on his forehead the sign of a small cross surrounded by a circle. This sign was familiar to him. George Pelham, controlling Mrs Piper, recognized his friends among people presented to him and spoke to them as he would have done in life. It is true that this test failed with Miss Warner, whom he had known as a child, but his efforts to remember her led to new evidence of identity.

The only reply which can be given to the spiritists is that equally precise information is given by non-spiritist subjects when introduced to strangers. Pascal Forthuny gave the most intimate details, mimicking the communicator but without personifying him. This was a metagmomic phenomenon without accompanying prosopopesis.

268 *The Evidence of Handwriting*

Automatic writing may go so far as to imitate the handwriting and signature of the deceased, even when he was unknown to the subject. A court of law would ask no further proof of identity. We recall Aksakof's case. His wife, in a state of trance, wrote two letters signed 'Nicolas' in old-fashioned letters. Nicolas was identified as a priest who had once lived in the neighbourhood, and a document in the same writing was found in the archives of the church.

Flournoy's case is a classic of this kind. Hélène Smith spontaneously gave him a communication from two former inhabitants of a small township in Savoy. They were the curé Burnier and the trustee Chaumontet, who had died more than fifty years before. Their signatures, produced in the hypnotic state, were identical with those discovered by research. The medium claimed that she had never been in that district.

As writing depends on the motor memory it is not surprising that a medium can reproduce the signature of a dead person. It is not necessary to appeal to cryptomnesia following Mlle Smith's visit to Chessenaz, which is not far from Geneva, to reject the idea that this phenomenon was a manifestation of the spirits of the two dead men. We have seen that mediumistic incarnations also show reproduction of motor memories.

In the case of handwriting the exploits of Raphaël Schermann are sufficient to show that a clairvoyant can reproduce that of unknown persons, living or dead. 'When Schermann had touched the writing of a person, or had before him a sealed envelope containing a piece of his writing, or had a specimen in invisible ink, or was asked to describe a person by psychic transfer, not only could he give such a description but could also, without having seen the person or his handwriting, imitate that writing,' wrote Fischer, having carried out 280 experiments over a period of two years with this remarkable subject.¹

269 *Messages in Foreign Languages*

The spiritists also quote in support of their case examples of mediums speaking or writing in a foreign language of which they are ignorant in the normal state. Judge Edmonds, who was President of the American Senate, quoted more than fifty examples. His own

¹ Oskar Fischer, 'Experimente mit Raphaël Schermann', op. cit., p. 13.

daughter, a clairvoyant, spoke modern Greek for an hour when a Greek visited her father.

Mrs Piper did not know Greek, but the George Pelham personality correctly translated a Greek sentence put to him by Professor Newbold. A humble house-porter in Milan wrote poetry in a foreign language. He filled a page with unknown symbols which were shown to Professor Corresio, a distinguished palaeographer, who found to his stupefaction that it was the complete text of a runic inscription in the museum, which he had not been able to interpret because the stone was broken. The communicating personality claimed to be the barbarian chief referred to in the inscription. It gave a translation with curious details. That porter should certainly have applied his faculty to deciphering Etruscan inscriptions!

Richet thoroughly analysed one case of this kind.¹ A woman who knew no Greek wrote in his presence about twenty lines of modern Greek without understanding it, as if she was copying from a book. The quotations given were found in the dictionary by Byzantios and Coromelas. This was probably only an extraordinary case of visual memory, to be compared with the feats of certain calculating prodigies.

Richet quotes about a dozen similar cases which he did not regard as sufficiently well established. Certain information is lacking which might reduce their marvellous appearance. Flournoy also gave examples, notably the case of an old lady who began to talk Hindustani in delirium. She had not heard this language spoken since she left the Indies at the age of four. Hélène Smith had obtained her knowledge of Sanskrit by turning over the pages of a grammar or other written documents.

270 *Precocious Inspiration*

There are cases in which the messages given seem to be beyond the medium's capacities. At the age of eighteen, a young American farmer with no scientific education wrote the *Arcana of Nature*, which was regarded as a learned and pioneering work (1860). Buchner referred to it as such in his works and was surprised when he discovered its origin. An apprentice mechanic received from the 'spirit' of Dickens, by automatic writing, instructions to finish his incomplete work, 'The Mystery of Edwin Drood', and wrote in

¹ *Traité de métapsychique*, op. cit., p. 274

trance 1,200 sheets in the same handwriting and style as those of the great novelist. The skill and knowledge shown in the writing and characterization were far beyond the normal abilities of the young man.¹ However, Flournoy's rigorous analysis has considerably reduced the paranormal appearance of this case.²

Dr Dusart and Dr Broquet stated that when they placed a pencil in the hands of a little girl aged three and a half who did not know any of the letters of the alphabet, they obtained this sentence: 'I am happy to communicate through this delightful little medium who is most promising...'. Spiritists explain by posthumous inspiration cases of intellectual precocity and certain abnormal cases in literary history, such as Socrates's daemon, Alfred de Musset's double, and Goethe's creative dreams. They quote cases of mediums with no artistic education who drew or painted remarkable compositions in trance; and, similarly, mediums who played the piano with a mechanical stiffness but with a virtuosity irreconcilable with their technical ignorance, but reminiscent of such and such a bygone master.

That mediums may deliver messages which they are not of an age to understand is no objection to the metagemonic theory. On the contrary, indeed. As for ascribing the genius of the living to inspiration by the dead, this is an absurdity, for the dead were once living themselves and it is well known that when the most illustrious of them communicate they seem to have completely lost their genius.

271 *The Promises of Ghosts*

There are some kinds of spontaneous phenomena which the spiritists regard as incompatible with the metapsychic explanation.

First, there are the dead who 'return' to fulfil promises. Husbands or wives, relations or friends, have promised, seriously or as a joke, to appear immediately after their death. This may take the form of an apparition, raps in the furniture, a push on the shoulder, or a scratching at the percipient's feet. Doubtless not all who have made such pacts have fulfilled them, but it is enough that we should possess records of some cases of the kind, duly attested. In many of these cases, the death was unknown to the survivor, who had often forgotten about the promise.

Here is a case given by Hyslop. According to the terms of the pact a skeleton was to remain in the possession of a group of friends.

¹ Aksakof, 'Animisme et spiritisme', op. cit., p. 327.

² 'Esprits et médiums', op. cit., p. 336.

Every time one of them tried to dispose of it as lumber, strange and persistent noises were produced in its neighbourhood until the macabre object was returned to one of its guardians. Dr Caltagirone's case is also very interesting. A friend promised, jokingly, that when he was dead he would come and break the lamp-pendent in the dining room. Six months later the doctor heard one evening a series of sharp taps on the smoke-consumer of the lamp. They were repeated during the following four or five days. On the last evening the porcelain smoke-consumer broke but remained suspended. The next day a loud noise was heard. Half of the bell had fallen on to the table, turning round the lamp-shade on the way. Then the doctor remembered his friend's promise and learned that he was dead.

From a metapsychic point of view, we first ask who is the subject producing these telergic phenomena? Either it is the dying man who produces physical effects at a distance or else it is the doctor himself whose subconscious, aware of the death, carries out the promise. It is likely, in the Caltagirone case, that both agent and percipient were subjects. The rarity of these phenomena, compared with the number of promises of this kind which are made, favours this hypothesis. We may also suppose that the teleplastic phantom created at the time of death may, in certain cases, maintain a life of its own independently of that of its originator, or rather, may become attached to other individuals for a certain time. Experimental teleplasty has not proved that such forms come exclusively from the subject and return exclusively to him.

When the promise takes the form of a scientific experiment it is not usually so well fulfilled. Some great psychical researchers have placed in official hands during their lifetime a sealed envelope of which they hoped to reveal the contents after their death. Myers, Lodge, Geley and Richet are among those who have never succeeded in doing so.

272 *The Cross-Correspondences*

The Myers school of English spiritists tried to perfect their proofs of survival in such a way as to convince the sceptical. They developed the *cross-correspondences*, for which Flournoy proposed the alternative name of 'complementary messages'. They consisted of communications obtained by automatic writing from a number of different mediums. Each message was fragmentary and sometimes unintelligible, but when the messages were put together like the

pieces of a jig-saw puzzle, they were seen to have a meaning in common. Of course the mediums were not in contact. Often they lived in different towns and did not know each other. Besides, the messages were often produced simultaneously. 'The aim of these ingenious and complicated efforts,' said Oliver Lodge, 'is evidently to prove that the phenomena are the work of some definite intelligence, distinct from that of any of the automatists. The piecemeal transmission of a message or literary allusion which is unintelligible to each of the writers taken singly excludes the possibility of mutual telepathic communication between them.'

When Myers died in January 1901 no medium was able to reveal the contents of the sealed packet which he left for this purpose. But his friends, convinced of his survival, still awaited the new proofs which he had promised. They came in the form of cross-correspondences given by some remarkable English mediums—Mrs Thomson, Mrs Forbes, Mrs Holland, Mrs Willett, Mrs King and Mrs Piper. Mrs Verrall, the wife of a distinguished classical scholar and a scholar herself, was the centre of this little group, called the Myers group.

Here is an example of a cross-correspondence. In a message given to his mother by Talbot Forbes he declared his intention of looking for another medium to confirm his identity. The same day, at Cambridge, Mrs Verrall suddenly produced a message referring to a pine planted in a garden, signed with a sword and a bugle. These objects were the emblem of Talbot Forbes's regiment and the references to the pine were correct. On another occasion Talbot, through his mother, announced that he was present near her and would give proof of it. A few minutes later Mrs Verrall, eighty kilometres away, had a vision of Mrs Forbes with her son seated near her. She gave a precise description of her activities.

Three years after the death of Myers, Mrs Holland, who lived in India, had a communication from him in which he spoke of a sealed letter, of Greek characters and of a text in St Paul. The same day, at Cambridge, Mrs Verrall received an identical message. The Greek text was an inscription engraved at the entrance of Selwyn College, where Myers had taught.

273 *Mutual Telepathy*

The *Proceedings* of the S.P.R. are full of such cases. As many as seven automatists are sometimes involved. The messages are further complicated by the subject matter, borrowed from classical

literature; and by the subtlety and complexity of the allusions. Only by a long study of these literary jig-saw puzzles can one piece them together and perceive the intention behind them. We refer the reader to the papers by Mr Piddington,¹ Miss Johnson,² and Mr G. W. Balfour.³ The most recent case (1917) which was analysed by Mr Balfour under the title of '*The Ear of Dionysius*', was, according to him, sufficient to warrant a belief in survival.

My own opinion is different, and I have explained it in one of my books⁴ under the heading, '*Télépathie concertante*'. Balfour himself admitted that the telepathic hypothesis was as plausible as the spiritist one. W. H. Salter, Mrs Verrall's son-in-law and a past President of the S.P.R., carried out an experiment with fourteen people to whom he had distributed quotations from classical and modern authors. He attempted to transmit to them telepathically one of these quotations.⁵ There was no sign of correspondence in the results, which was only to be expected as the persons concerned were not psychically gifted. On the contrary, there was a telepathic communion between the excellent automatists who produced the cross-correspondences, and this explains the relationships between the messages. They were a phenomenon of collective telepathy, Mrs Verrall subconsciously selecting the material and co-ordinating the messages given by the automatists.

M. Pigou pointed out⁶ that Mrs Verrall had produced messages for a long period which showed the influence of a Greek quotation transmitted to her mentally by Dr Verrall, and that these messages had been constructed in the same style as those purporting to come from Myers. He also emphasized that the apparently complementary nature of the messages arose from a general characteristic of telepathic communications, in which the idea is not reproduced literally, but evokes ideas in the minds of the percipients by association. For example, when Warcollier suggested Socrates, his percipient had an impression of a hoary head and a Greek temple.⁷

Even after the death of Mrs Verrall the Myers group continued to produce similar phenomena on account of the persistence of an

¹ J. G. Piddington, 'A series of concordant automatisms', *Proc. S.P.R.*, Vol. 22, Part 57, and Vol. 24, Part 60; 1908-10.

² A. Johnson, 'A reconstruction of some "Concordant Automatism"', *Proc. S.P.R.*, Vol. 28, Part 68.

³ G. W. Balfour, '*The ear of Dionysius*', *Proc. S.P.R.*, Vol. 29, Part 73.

⁴ '*Personnages d'au-delà*', op. cit., p. 268.

⁵ *Proc. S.P.R.*, Vol. 36, Part 103.

⁶ *Proc. S.P.R.*, Vol. 23, Part 58.

⁷ Warcollier, '*La Télépathie*', op. cit., p. 192.

association maintained by belief in survival and psychic faculties of the first order. Participants such as Mrs Salter and Mr Piddington possessed the classical knowledge which most of the associated 'mediums' lacked. The cross-correspondences, far from proving survival, are a most convincing demonstration of collective psychism.

274 *Other Evidence Given by the Myers Group*

The *book-tests* and *newspaper-tests* which we mentioned earlier (143) were another kind of systematic evidence given by the Myers group. Here is an excellent example reported by Barrett. At one of Mrs Leonard's séances the Myers communicator asked Barrett to take a book from a book-case on the right side of a room at the top of his house in Devonshire Place. (This house was unknown to the medium.) Barrett was to go to the second shelf, four feet above the ground, and take the fourth book from the left. 'At the top of page 78,' the medium said, 'there are a few words which Mr Myers hopes you will regard as his reply to all the work you have done since his death.' The communicator did not give the name of the book, but said that it was connected with 'moving forward'. It was near to one or two other books which had been of great interest to Barrett some years earlier, but were so no longer. The reference was to studies made in his youth.

It was found that the book indicated was George Eliot's *Middlemarch*, the title of which certainly suggested 'moving forward'. The quotation was: 'Yes, yes, I remember; you will see that I remember them all'. This was evidently intended as an assertion by Myers that he remembered his friends who were still alive. The neighbouring books should also have been novels by Eliot, but the maid, while dusting, had removed two of them and replaced them by two books by Tyndall on *Sound and Heat*. In his youth Barrett had been assistant to the distinguished physicist, and had even collaborated in the experiments described in these books.

Although Mrs Leonard's exploits were ascribed to a deceased personality they require no other explanation than perceptive metagnomy. Non-spiritist subjects can read the contents of sealed envelopes.

275 *Reincarnation*

Reincarnation was one of the articles of Allan Kardec's spiritist faith. One of his followers, G. Delanne, tried to prove it.¹ His

¹ Delanne, *Documents pour servir à l'étude de la réincarnation*, Paris, 1924.

evidence included the existence of infant prodigies, spontaneous memories of previous lives, regression under hypnosis, and the prediction of reincarnations. There is no need to spend much time in refuting the first argument, for precocity is an abnormal biological phenomenon which occurs particularly in subjects such as music and mathematics. We have never heard of philosophical infant prodigies, which should have been so if Descartes or Spinoza were reincarnated,

The cases of 'memory of former lives' in which a subject sees in a dream unknown places where he thinks he has lived and which he later recognizes in real life can be explained by clairvoyance combined with autosuggestion. Other cases of a type known in psychology as 'false recognition' or 'paramnesia' have been explained by Bergson as an inversion of perception and memory.

De Rochas gave evidence in 1911 of hypnotic regression of memory.¹ He hypnotized nineteen subjects and took them back in time. The subjects reverted to the memories and way of speaking they had at each stage of their life. Rochas took them back to the moment of birth and the subject then began to describe backwards another life. A study of the personalities created in this way showed that they were inventions related to certain circumstances in the subject's present life. No real evidence of their genuineness could be found. Flournoy made an excellent analysis of the proceeding involved in these subliminal creations with Hélène Smith.²

Rochas not only suggested to his subjects that they should remember the past; he also asked them to foresee their future existences. These experiments were unconvincing, but the spiritists have pinned their faith to such cases as that of a child of five who was 'reincarnated' in another little girl very like her. The mother was informed this would happen by table turning. This case can be explained by precognition and ideoplasty.³

276 *So-called 'Inexplicable' Cases*

Bozzano collected three groups of spontaneous cases which he regarded as inexplicable. These were: *apparitions of the deceased at*

¹ *Les vies successives*, Charcormac, Paris, 1911. Definitive Edn. Leymarie, 1924.

² 'Des Indes à la planète Mars', *op. cit.*

³ Cf. *Personnages d'au-delà*, p. 220.

For a modern experiment similar to those of Rochas, see *The Case of Bridget Murphy*, by Morey Bernstein. It is impressive to the uninitiated but in my opinion can be added to the numerous other cases of subliminal romances.

a death-bed, *telekinetic phenomena related to a death*, and what he called '*transcendental music*' at a death-bed. But it is not difficult to explain such cases. We know that the death crisis favours the teleplastic faculties. Phantoms at the bedside of a dying person have probably been created by the latter. He has projected the images of dear ones whom he believes he is about to rejoin, in accordance with religious tradition. Even if consciousness is absent the subconscious mind may be active. If the deceased who appear used to live in the house their psychic remains may assist the phenomenon. Bozzano said that in telepathy it was usually the apparition of the agent which appeared to the percipient. Here the reverse occurs. But we are not dealing with cases of telepathy; the phantoms are objective.

As for the telekinetic phenomena at the time of death, we refer to our previous discussion of 'telepathic hallucinations'. We shall not spend much time on the last group of 'musical' phenomena. These are auditory phenomena, which are more easily produced by illusion than visual ones — as, for example, a beautiful symphony may be heard in a sea shell. Before accepting so improbable a hypothesis as that of 'choirs of astral angels' we must exhaust all the others, even that of pathological hallucination. But an objective interpretation of such cases cannot be given unless the evidence is sufficiently reliable and detailed, which it often is not.

277 *The Autonomy of Spirits*

People who are unfamiliar with psychology are often strongly impressed by the autonomous and independent character of trance personalities. The normal man has so strong a sense of 'self' that he finds it difficult to accept the possibility of dissociation of a personality, and the formation of different centres of consciousness. Even a man with Hodgson's background said, when studying Mrs Piper's personalities, that the evidence of identity given was less convincing than 'the integration of all these details into a coherent whole, into a single intellect and character'. The effect is heightened when these personalities express ideas and wishes opposed to those of their mediums. Flournoy quoted a case of automatic writing in which a deceased brother dictated to his sister, on two occasions, a course of conduct exactly contrary to the one she intended to follow. The psychologist explained that the subject had simply imagined

what her brother's reactions would have been when he was alive, in the same way that we are always putting ourselves in other people's places.

In other cases it is a question of thoughts which have been repressed by some strong emotion: shame, vanity, hatred, etc. The subconscious mind finds relief in liberating them, ascribed to a separate personality. This is a kind of catharsis like Freud's psychoanalysis. This was the case with Stainton Moses, a highly intelligent minister, who was able to practise self-analysis. He took all possible precautions to eliminate the influence of the conscious mind. He obtained messages attacking his religious beliefs, and arguments ensued between his conscious self and the invisible personality.

Considerable knowledge of the complex emotional life of the subconscious is necessary not to be taken in by the personifications which appear separate from the true self. Attempts have been made to establish psychological criteria of their reality. In 1921 Whately Carington suggested using the word-association test invented by Jung to study the emotional complexes of his patients.¹ The experimenter says a list of words to the subject, who replies to each one as quickly as possible with the first word that comes into his mind. The time taken for each response is measured in seconds and fractions of a second. Any delay in replying is taken as a sign of an emotional association.

Mr Carington applied this technique to a medium in the normal state and to a 'deceased personality' in the trance state. The similarities and differences in the responses were analysed statistically. A correlation was found between the personalities of mediums and their 'controls', but not between mediums and communicators. Criticisms having been made, by Thouless in particular, the experiments were resumed to compare the 'same' personality, communicating through different mediums. These experiments did not indicate that the communicators were autonomous. Tyrrell questioned the validity of the method. A communicating personality's degree of autonomy will depend on the degree to which the medium believes in his independence, and possesses information about his character and life.

¹ 'A Suggested New Method of Research', *Proc. S.P.R.*, Vol. 31, Part 81. The method is explained with criticisms and results in *Science and Psychical Phenomena* by Tyrrell, London, 1938.

III. THE PSYCHOLOGY OF SPIRITISM

278 *Materialistic Criticisms*

The weakness of the spiritist hypothesis is revealed when it is subjected to criticism as a whole, whether the criticism be made from a spiritist, materialist or parallelist point of view. In modern experimental psychology there is no thought without a brain and no personality without an organism. Even those who do not confuse the psychological with the cerebral are satisfied with the idea of a close parallelism between the two. Richet would rather have believed in invisible angels or demons than have accepted that a man could feel, think and remember without a brain. 'Without exception, all physiological and psychological observations show the close and inexorable parallelism between memory and cerebral activity. The connection seems as intimate as that between a lamp and the light it gives, and weighty evidence would be needed before I could believe that light came from a broken lamp.'

This materialistic outlook prevented Richet from forming any hypotheses in psychical research, and made him cling to systematic empiricism. But some of his criticisms of spiritism were valid. Lodge claimed that the brain was like a musical instrument, and that it could be destroyed without destroying the musician. Richet replied, in effect, comparison is not evidence. We do not know how to separate the musician from his instrument; we see them chained together from birth to death. Again, it is difficult to conceive that the musician could give up his place from time to time to another who would play different tunes. This may be acceptable as a poetic metaphor, but not as a scientific statement. In this Richet was perfectly correct.

279 *Inferiority of the Communications*

The psychology of the communications themselves would alone suffice to show the falsity of the spiritist belief. Their platitudinous and foolish character has struck all experimenters. As early as 1869 Huxley said: 'If someone offered me the faculty of overhearing the gossip of old women and curates in a nearby town, I should decline the favour, having better things to do. And if the people in the spirit world do not converse with more wisdom and good sense than their friends report, I put them in the same category. The only

good I could see in a demonstration of the truth of spiritism is that it would provide an additional argument against suicide. I would rather live as a road-sweeper than die so that a medium could make me talk nonsense at a guinea a séance'.

Spiritist séances are still what they were in Huxley's time. They still consist of pointless homilies, disconnected remarks, and childish and sometimes indecent jokes. Aristotle, Joan of Arc and Napoleon are no better conversationalists than the good ladies of the neighbourhood, and it was only when Victor Hugo was at the table in the Jersey séances that Molière expressed himself in acceptable verse. This is indeed a most damaging fact. We have never received from the Beyond a thought to equal one of Pascal's, or a sentence of the quality of Chateaubriand's.

The intelligent spiritists are aware of the gravity of this criticism. They make all sorts of suppositions to account for the facts. They say that the superior spirits escape from the attraction of the earth because of their finer astral body, and that they pass into the 'spheres' and do not return; while the spirits who manifest are the less refined, although they sometimes take the names of higher spirits. The latter have to send proxies to represent them.

'What does it matter,' said Allan Kardec, 'whether a spirit is or is not really that of Fénelon? If he talks like Fénelon he is a good Spirit; the name he gives us is indifferent to us.' A little further, to explain the spelling mistakes made by the illustrious author of the *Lettre à l'Académie française*, he states that since spirits are only interested in ideas, they do not bother to use 'long and inconvenient forms of human language'. Unfortunately ideas are as lacking as style in their communications.

280 *Absence of Scientific Information*

Having surveyed the field of the 'occult' and having satisfied himself of the impotence of spiritism to prove survival, Maurice Maeterlinck wrote: 'The smallest astronomical or biological revelation; the slightest secret of an earlier age, for example the method of tempering copper used by the ancients; an archaeological detail, a poem, a statue, a forgotten remedy, a fragment of one of the unknown sciences that flourished in Egypt or Atlantis; any of these would be a far more convincing matter than hundreds of more or less literary reminiscences'.¹ It is significant that the spirits have never been of

¹ *La Mort*.

any help to scientific research workers by providing the solution of a problem or the suggestion of a discovery. All the geniuses who have left the earth are dumb or, as pure spirits, have lost their creative force.

When the spirits have been consulted about a subject being debated by scientists they have contributed nothing valuable. When the direction of revolution of the satellites of Uranus was under discussion General Drayson in the United States called on the services of a medium, through whom a great astronomer of the past communicated. He gave an opinion on the direction of revolution but his arguments were based on false considerations.

The large number of planetary romances, which gave scope to the fantastic imaginations of mediums, contained much information on the 'inhabited worlds'. Mrs Piper, so lucid in exploring the human personality, gave scientific explanations purporting to come from the Beyond. She gave detailed information about the solar system, and announced the discovery of a magnet which attracted light.

We need hardly refer again to Hélène Smith's exploration of Mars in 1894, a romanticized version of ideas contained in Flammarion's *Astronomie populaire*. The medium even produced a strange Martian language which at first intrigued philologists, but which Flournoy mercilessly exposed as disguised French.

281 *The Life of the Beyond*

When spirits are pressed to describe their life in the Beyond, they confine themselves to vague traditional formulae. Often they say it is inexpressible, that we would not understand, or sometimes that they are not authorized to speak of it. However, Raymond Lodge, the son of Sir Oliver Lodge, who was killed in the war, described his life in the Beyond through the mediumship of Mrs Leonard.¹ According to him the Beyond was similar to this world. People and things appeared solid and substantial. He lived in a brick house with trees and flowers around it. The ground was so real that if he knelt down it made his clothes dirty. He never wanted to eat, but said that some of the discarnate did feel a need to do so. When he pinched himself he experienced the same sensation as in life. He felt cold and warmth only when he re-entered terrestrial conditions with the

¹ O. Lodge, *Raymond or Life and Death*, Methuen, London, 1916; *Raymond Revised*, 1924.

assistance of the medium. To explain the material nature of the future life, Raymond said that the spirits used emanations from our world, 'essences', 'gases', 'ethers' and 'atoms' which they condensed and solidified so that they assumed the appearance of earthly things.

After the publication of *Raymond*, the spirits exerted themselves to the utmost to give us additional information. According to P. E. Cornillier¹ the Beyond is divided into ten spheres. The first contains the spirits of animals, and the second the youngest human spirits, who are reincarnated without regaining consciousness. The third and fourth contain the discarnate who still have affinities for the earth. Spirits in the fifth and higher spheres do not communicate directly with the earth; they possess astral vision and have no remaining desire than to raise themselves in the spiritual hierarchy. Spirits of the sixth sphere are no longer forced to reincarnate, but it is optional. Higher spirits belong to the seventh and eighth spheres, and to the ninth and tenth belong the spirits of light who direct evolution.

There is neither chance nor determinism in this system. Everything is controlled by guiding spirits, including geological phenomena and changes in animal species. Clairvoyance is stimulated by them; when a prediction is not fulfilled it is because their providence has intervened. The spirits who wear clothes and build themselves houses belong to the third and fourth spheres. They construct them with radio-active radiations from our own houses and clothes. As they are in a material state of very low density everything around them appears as solid as our world does to us.

Like the reincarnational romances, the romances about the Beyond are drawn from the subject's subliminal imagination, more or less influenced by the mind of the experimenter. The freedom of the individual imaginations shown remains within the limits of the accepted framework of ideas in the subject's environment. Hence the spirits do not seem to be in agreement on so fundamental a question as that of reincarnation. In English-speaking countries they reject the idea as a heresy, but the belief in successive lives is the central dogma in France and countries influenced by Kardec.

282 *Mental Instability of 'Spirits'*

The spirits lead us as far astray when they intervene in the affairs of

¹ P. E. Cornillier, *La survivance de l'âme et son évolution après la mort*, Alcan, Paris, 1920.

our world as when they tell us of the beauties of their astral life. Spiritists themselves admit that one should not be so unwise as to follow their advice. Maxwell quotes a typical case in which they gave disastrous advice.¹ Even if they do not lie, they are evasive. If a question is asked which they cannot answer they give a vague reply or disappear; they have to go, they are called elsewhere, they have an important mission to carry out. Sometimes they vanish in the middle of a sentence and another personality, unrelated to the first, appears. William James said it was as if a resistance yielded momentarily to the desire to say something. The silent presentation of an evocatory object is sufficient to send them suddenly away or disorientate them, as the approach of a magnet disturbs a magnetic needle.

The gaps in their memories are sometimes astonishing. They have just told you insignificant details as proof of their identity, but important events in their earthly life they have forgotten. They are incapable of going into the next room to read the title of a book on the table.² The inconsequentiality of their reasoning is sometimes no less surprising. Further, the ideas of the spirits are constantly mingled with the medium's memories, which is inexplicable if they have taken possession of his brain.

Spiritists explain these disappointing peculiarities by the difficulty of communication. Hodgson compared this communication to a conversation carried on between two distant persons by means of two drunken messengers. Graham went one better, describing the writing of a letter in darkness so that it could be handed to a sleepy postman to carry across an unknown country, bristling with obstacles and toll-houses, to a temporary address. Then one received by the same postman a reply dictated to an uneducated secretary who did not always understand the sense of what she was writing! These metaphors give a good idea of the facts, which cannot be reconciled with the simple hypothesis of a piano and a pianist. Even if the pianist is not quite at home with the instrument that is no reason why he should play out of tune, forget pieces which he knows by heart and parody others, and, in short, behave as if drunk or mad.

¹ J. Maxwell, 'Les phénomènes psychiques', op. cit., p. 232.

² Cf. the chapter on the memory of spirits in *Personnages d'au-delà*. The case of Margaret Veley provides an example of a communicator who made a number of mistakes when describing her childhood and youth.

spiritist theory. We could ask why those we have lost give us no sign of their presence, why they do not return when we call, why they do not give us information about things that interest us, why indeed the spirits do not visibly co-operate in the work of human justice and knowledge, and try to convince the world by clear proof of their existence. Whenever a serious experiment has been arranged, as in the case of Myers's sealed packet, it has failed.

But when the 'evidence' usually offered of their existence is examined with the perspicacity and psychological knowledge of a James or a Flournoy, it is seen that the facts suggests a comprehensive and profound metapsychic theory. The fragmentary and disappointing characteristics of spirits are explained on the one hand by prosopopesis, which does not create real personalities but somnambulistic ones in a dream state, and on the other hand by metagnomy which functions in an intermittent and irregular way. The metapsychic theory restores the continuity between the facts of spiritism and other observations in psychical research, and gives a rational interpretation of them.

CHAPTER XI

METAPSYCHIC KNOWLEDGE

I. KNOWLEDGE OF THE PRESENT

285 *Metapsychic 'Perception'*

Metagnomy has often been ascribed to a sixth sense, but this is a mistake. Metagnomic knowledge, whether perceptive or representative, always makes use of known sensory elements and does not introduce new ones, unknown in ordinary experience. Like Oesterreich, we wish to emphasize this point.

We must now discuss a question which we left unanswered in the chapter on metagnomy: is there in certain cases genuine perception apart from the sensory organs? In internal autoscopy, for example, in cryptoscopy and telaesthesia at a distance, the subject says he actually sees things which he normally could not. The spiritists would say that his astral body, containing sensitivity, had passed through the material obstacles. But we have already shown that this theory is untenable.

How then does the subject see and hear? Evidently it is only a case of a kind of hallucination, of quasi-perception and not of normal perception. It does not seem different whether it concerns the past or the present. The first hypothesis which suggests itself is that of 'telepathic metagnomy'. According to this the subject does not perceive things, but reads the thoughts of those who have perceived them. When Ossowiecki noticed the hand writing of the note he had been asked to read, and when Mme Lambert, 'travelling' under hypnosis, entered a room and described someone who was no longer in it, *but who had been there a quarter of an hour before*, they were not grasping things but a past state of consciousness, that of the person who perceived the things.

Can this interpretation be applied to all cases?

In the very simple case in which the subject guesses a card which has been drawn at random from a pack and which has not been seen by anyone, we must suppose a sort of direct extrasensory perception.

We shall now examine this hypothesis of pure metagnomy in relation to the Bergsonian theory of perception.

286 *Bergson's Theory*

Materialistic or parallelistic psychology admits only one kind of perception. External objects physically affect the sensory organs and the impression is transmitted to particular centres of the cerebral cortex where perception takes place.

Bergson vigorously opposed this theory, both on grounds of logic and of experience. He showed that our body is an instrument of action and could not give rise to a representation. The body does not conserve memories but motor habits. There are no sensitive nerves but only motor nerves. The brain responds to stimuli from the outer world by attitudes and actions. Perception is outside the body, in the things themselves. This statement, which has been found so strange, is clear and logical if one accepts that things are only 'images'. The body, being another image, could not contain them.

Perception is not a disinterested function; it does not serve knowledge, but action. 'Perception consists of detaching from a combination of objects the possible action of my body upon them.' It is true that emotions and memories are incorporated in this pure perception and give it a personal character. The seat of the emotions is in the body, as the seat of perception is in external objects. As for memories, they are not localized. With memory, one enters the realm of pure psychology, the domain of the mind.

The Bergsonian theory of perception is hardly verifiable by experiment (except for the anatomical identity of sensory and motor nerves), but a logical extension of it is the theory of memory which is experimentally verifiable and has actually been confirmed by the study of cerebral localizations. Psychical research has also confirmed these theories. Although he had been President of the S.P.R., Bergson never attempted to include the facts of psychical research in his philosophy, either from academic caution, or because he knew that his conception of time, the pivot of his system, tottered under the well-established facts of precognition. In any case his theories of perception and of memory can fairly easily be detached from the rest of his philosophy.

287 *Explanation of 'Perceptive Metagnomy'*

In the works of Bergson there is only one allusion to the possibility

of extrasensory perception. 'That matter should be perceived without the assistance of a nervous system and sensory organs is not theoretically inconceivable, but it is impossible practically, because such perception would be of no use. It would be suitable for a phantom but not for a living, that is to say acting, being.'¹ The word phantom should not be taken here exactly in the metapsychic sense, for there are phantoms which seem to act. However, this is accurate, if we take into account that phantoms have only an artificial existence more closely related to the dream than the waking state. They are oniric creations of the subject. Trance is a state of detachment from life, consequently in this state perception without the aid of the senses is possible.

How are we to think of this perception? Since it is not the result of the influences of external objects it will lack the quality of real presence described by William James; it will have the characteristics of a representation. Indeed, this is what is observed. However, we must explain how the subject's mind makes a choice among the infinite number of possible perceptions. Suppose he is before a sealed box containing a coin. According to the Bergsonian theory the portion of space containing the box offers its entire external and internal material content; but the body, which exists only for action, takes only the part which is of practical interest — the outside of the box. 'What is given is the totality of the images of the material world with the totality of their interior elements. But if one supposes true, that is to say spontaneous, centres of activity, the rays which reach them and would interest that activity, instead of traversing them, would appear to return to make a picture of the object which sends them.'²

The coin in our box is not perceived, but it exists; and between being and being perceived there is a difference only of degree, not of kind. The coin is an image as real as that of the box, but it is not of interest for immediate action. This action is limited to the reflection of light from the box, the formation of a physical image on the retina, the conduction of the nervous impulse to the brain, etc. However, the coin could be apprehended by pure mind.

288 *Criticism of the Theory*

This explanation may not be found very satisfactory because the needs of action are not definitively established by nature at the

¹ *Matière et Mémoire*, p. 33.

² *Ibid.*, p. 25.

beginning of things. There are many occasions, in the most primitive life, when a man might need to know something hidden from him, in the ground or the sea, under the bark of trees, and so on. In spite of his need the knowledge does not reach him because of the rigid laws governing the nature of obstacles. Ways of evading these laws have been found by scientific inventions such as the X-ray, but not by need alone.

Must we accept that evolution, in giving the primacy to consciousness, has closed for ever the possibility of transcending material limitations? Are there no living beings, reduced to pure instinct, who could make use of that omniscient perception which surpasses the sensory faculties? When we think of certain remarkable achievements accomplished by insects or other animals, this hypothesis cannot be dismissed as absurd. On this view, the psychic subject rediscovers in the trance state this faculty which has disappeared in the evolutionary rise of consciousness (328).

But, in this case, why does not this temporary transcendence come into play regularly in dreams and waking dissociated states? Sometimes it does. The materials of dreams are usually memories more or less logically assembled, but for psychic perception to take place it is necessary to reach a much deeper level of subconsciousness. The mind, completely relaxed, must at the same time be directed towards the knowledge to be acquired; there must be a penetrative effort corresponding to a suggestion, usually coming from outside, in the waking state. Perhaps it is also necessary for special conditions to be fulfilled to make the sleep one of those profound states in which, as Bergson admits, there may be produced 'the most mysterious phenomena of psychical research'.

It is true that his theory leaves our ignorance in this respect as great as ever, but it is sufficient that it permits us to conceive the possibility of extrasensory perception, which appears inexplicable and contradictory from the point of view of materialistic philosophies based on Locke's axiom: *Nihil est in intellectu quod non prius fuerit in sensu*.

II. KNOWLEDGE OF THE PAST

289 *The Bergsonian Theory of Memory*

Bergson's theory of memory, a logical consequence of his theory of perception, is admirably suited to psychical research and it is

remarkable that no one has yet pointed this out. With memory, we enter the realm of the mind. He does not regard memory as a cerebral function, excluding that particular kind of memory which registers motor habits. Memories are quite different from recurring perceptions. They are created at the moment of perception. 'As the perception is created, its memory is drawn up at its side, like a shadow beside a body.'¹ Memories are not localized, while perceptions always are and occupy space. On the other hand, they have a position in time. No memory is ever lost and the most insignificant and distant of them could reappear in consciousness in exceptional circumstances; this is the case in cryptomnesia, which occurs in hypnotic and psychic states. Usually memories only present themselves in case of need, to be incorporated with new perceptions to which they have some resemblance. Thus memory strengthens and enriches perception which, in its turn, attracts an increasing number of complementary memories. 'Distinct perception is produced by two currents of which one, the centripetal, comes from the external object and the other, the centrifugal, from what we call the pure memory.'²

It is the study of memory which is of most interest to us for explaining metagnomy. The pure memory does not exist for consciousness, it is virtual, and it does not appear in consciousness when we form representations. What we have then are 'memory-images', pure memories condensed and accompanied by motor or emotional effects, 'materialized' memories. The pure memory is a subconscious psychological state. Between the level of action and the level of pure memory, there are 'thousands and thousands of different levels of consciousness, thousands of integral but diverse repetitions of our entire life experience. . . . Intelligence, always moving along the space between them, rediscovers or rather recreates them unceasingly'. Bergson represents these levels symbolically by sections made across a cone of which the base is in the past and the point in action. To locate a recollection in the past consists of 'an increasing effort of expansion by means of which memory, always entirely present to itself, extends its recollections over a wider and wider surface and thus finally distinguishes, in the hitherto confused conglomeration, the recollection which was not in place'.

That, in outline, is the Bergsonian theory of memory in which

¹ *Matière et Mémoire*, p. 136.

² *L'Évolution créatrice*, p. 138.

memory is the material upon which the mind draws. We shall develop this view to explain telepathic metagnomy.

290 *Interference Between Two Memories*

In our study of telepathy we saw that it could be explained with difficulty by a physical model, the most complete analogy being with wireless. The idea of an agent and a percipient is a convenient framework, but is far from applying to all cases. As Mrs Sidgwick observed¹ these terms were introduced at the beginning of the work of the S.P.R., and it has since been recognized that the active role could be played by the percipient, or at least by the agent and percipient together. However, the facts enable us to say that a subject, nearly always gifted with psychic faculties, experiences at a certain moment, without sensory aid, intellectual or emotional states which were clearly part of the past experience of another person. We should say 'the past or present experience' of another person, but on the Bergsonian hypothesis, the present can be regarded, from the point of view of memory, as being already past.

We shall say then that telepathy is a phenomenon of interference between two minds; a part of *A*'s memory is communicated to *P*'s memory and hence his consciousness. Obviously we speak figuratively, since the mind is not spatial, but it would be impossible to express ourselves if we did not talk in terms of space and Bergson continually does so himself. We must emphasize that this intrusion of elements of *A*'s memory takes place through *P*'s memory; this is what we mean by saying that the transmission is made from one subconscious mind to another. *The foreign elements reach P's consciousness as a recollection and not as a perception.* Sometimes it has a quality of strangeness which prevents *P* from confusing it with his own recollections which always have a personal quality, but this is not always so and it is not uncommon for the foreign elements not to be recognized.

What happens when a recollection rises to consciousness, according to Bergson? It tends to 'materialize', adding to itself motor and sensory states, which are purely bodily phenomena. In particular the subject will have emotions, gestures, speech and writing. We should observe that these are secondary reactions and that the theory of pure memory does not seem to permit the

¹ 'A contribution to the study of the psychology of Mrs Piper's trance phenomena', *op. cit.*, p. 319.

transmission of emotional or motor 'images'. Although Bergson never explained himself on this point, it is a result of his system that pure memory is engendered by perception. There is no emotional memory and the motor memory which produces habit is an exclusively cerebral and bodily function.

Whether there is an emotional memory is still an open question in experimental psychology. Many writers say there is and the facts of telepathy give them some support. There is no reason why, of all that happens in consciousness, only perceptions should leave a trace in pure memory. We understand that Bergson was attempting to separate what arises from things and what arises from the body, which is a small part of things. But observations in psychical research are opposed to this theoretical view, for perception is always coloured by subjective emotion and we may accept that this quality of the recollection is retained in the memory no less than the purely sensory qualities of things.

291 *Metagnomy From the Point of View of Memory*

According to the views we have put forward, there is no difference in kind between the phenomenon which takes place between an agent and a percipient in telepathy, and that which takes place between a clairvoyant and his consultant. Whether the subject reads the human personality before him or uses an object as a stimulant, he is gaining access to more or less numerous layers of his memory. No materialistic theory can account for the facts.

Since the mind does not occupy space it is easy to see that the subject can find in space the person with whom he is to enter into mental contact. Nor is there any difficulty in the fact that he may require a material aid. If there were no obstacle to such penetration into someone else's memory, no individuation would be possible. It would be not only 'the end of the secret' as has been rather prematurely written,¹ it would be integral communism. Telepathy is fortunately a rare faculty of the mind.

This appropriation of parts of a memory in the metagnomic act is not assimilation² if, as Bergson thinks, each recollection is marked with a personal stamp and enters into countless associations in

¹ Binet-Sanglé, *La fin du secret*, Albin Michel, Paris, 1922.

² Lord Balfour gave the name 'telepathic possession' to cases in which the memories of the agent and percipient became instantaneously fused instead of remaining distinct. Tyrell, commenting on these cases, says that they suggest 'a sharing of experience and even a sharing of individuality'. (*Science and Psychical Phenomena*, p. 283.)

which the entire content of memory seem to be implicated. It is a communication which shows that the mind, without possessing extent, is divisible and constitutes a kind of universal substance. The knowledge which filters into the subject's mind in this way may become separately organized and give rise to a phenomenon of prosopopesis. That is to say, the subject may reconstruct the personality of which he knows the life and character by drawing on the memory of another person. He can describe it, objectively and subjectively at once, as if he saw it living in the past — yet another proof that the so-called pure recollection contains emotional and motor memories. Or he may dramatize it, putting the new personality into relation with his body or a part of his body, in one of the many forms of prosopopesis. We see here that the two important functions which we distinguished in mental metapsychics mutually support each other. If hypnotic subjects can dramatize what is suggested to them with great perfection, we should not be surprised to see this done by a subject when the material to be dramatized is a real personality of which they have intercepted all or part of the memory.

292 *The Memory of the Dead*

'Accumulated observations,' said Osty, 'show that clairvoyant subjects make use of the dead human personality in the same way as they do of the living. The selective action of their faculty is stimulated by the same methods in each case. They receive and express information of the same kind, and bearing on the same subjects.'¹ Here we reach the chief objection which psychical research has to make to the survival hypothesis. *Since experience shows no difference in the clairvoyant faculty whether the person is living or dead, it must be that the memory of the person survives.*

In formulating this proposition, we remain within the spirit and the letter of the Bergsonian doctrine of memory. Bergson expressed himself very clearly on this point in his famous discussion on *the soul and the body*.² Thought is not a function of the brain, it is only the 'point at which mind is inserted into matter'. The mind extends beyond the brain at every point. Everything occurs as if the body was merely used by the mind. Hence, Bergson concludes, survival is probable, at least for a time x . But he remains indefinite and does not indicate precisely what of the mind could survive.

¹ 'La connaissance supranormale', op. cit., p. 319.

² 'L'énergie spirituelle', op. cit., p. 31.

Psychical research enables us to say that it is primarily memory. Thus philosophic induction based on the observations of biology and psychical research resolves the difficulties as 'telepathy between the living' could not. We have come far from the spiritist hypothesis. These surviving memories are obviously not 'dead psychology', collections of records stored up outside space, as the occultists imagine, but neither are they living personalities. The only kind of life we are justified in ascribing to them is an unconscious or somnambulistic life controlled by the automatism of memory.

To revive them to a life which mimics ours, although it is still incomplete, the subject has to lend them a little of his body and perhaps of his mind. This 'will to personify' which William James perceived in spiritist phenomena should not be ascribed to the surviving personality but to the subject who resurrects it. The deceased is passive and not active in spiritist metagnomy. 'If I was asked whether the will to communicate was Hodgson's or an imitation of Hodgson's,' wrote James at the end of his report on Mrs Piper, 'I could only say I was undecided and awaited further facts. . . .' Confining ourselves to the Piper phenomena, we have enough facts to reach a conclusion. We have referred several times to Mrs Sidgwick's excellent work on this subject. In her opinion all Mrs Piper's personalities were examples of prosopopesis. But she ascribed the convincing nature of certain of them to telepathic communication by their surviving mind. We accept this conclusion, based on a methodical analysis of the experimental data, but with this comment. In telepathy Mrs Sidgwick herself did not necessarily ascribe the active role to the agent and the passive to the percipient. In psychical phenomena, it is always a living person who revives the dead.

293 *Evocatory Aids*

We have seen that a clairvoyant's faculty could be stimulated by an object. We are reduced to conjecturing about the nature of the stimulus. It may be physical or mental; more precisely, it consists either of a perception, usually tactile, or of a representation. As we know, there is a difference of kind between the two. However, we could disregard this difficulty and postulate a reciprocal action in the act of perception between the mind and things perceived. According to Bergson the mind 'settles' on matter, of which it takes, in a sense, an infinite series of instantaneous pictures; why should it not

also leave a personal mark on the object, so that there would be henceforward a close correspondence between the object and the person, and a mental link would be established between all persons who perceived the same object?

This invisible marking, neither material nor fluidic, might vary in intensity according to how much the person had perceived the object. This fits in well with experience, which shows that an object which has been in someone's possession for a long time has great evocatory power. Another observation which has been made is that an object placed in the hands of a true sensitive enables him to establish contact with all those who have possessed it. Although touch is the most effective of the senses for this purpose, the object can have a stimulating effect without being touched. There have been cases in which the object, a picture for example, was simply looked at. The state of mind accompanying the initial perception must be of importance according to the reactions of the subjects. Thus the evocatory power is related to the feelings associated with it, and this is another reason for thinking, in spite of the Bergsonian theory, that emotion is not an 'impurity of memory' but an essential factor in it.

294 *William James's 'Spiritual Reservoir'*

The philosopher William James was deeply impressed by the numerous séances he had with Mrs Piper, and by the conversations which he had through her with the 'spirit' of his old friend Hodgson. But he retained his critical faculty and was not convinced of survival. He saw in the 'Piper phenomena' a 'will to personify' which could be ascribed either to the surviving Hodgson or to the subconscious mind of Mrs Piper herself; and he recognized that this entity could draw on supranormal sources of information.

Thinking about the nature of these sources led him to his famous theory of a collective 'spiritual reservoir', accessible to all subjects in a state of trance. This idea was suggested to him by Fechner's *Zend Avesta*. During life the memory of an individual remains attached to his brain, but after the dissolution of the body it survives, stored in the external world as the immediate or distant effects of past actions, 'the cosmos being, to however slight a degree, modified in structure by each act inserted in it'. These physical traces (in which we can easily recognize the astral records of the Orientals)

could be revived by the medium who would thus construct a 'spiritual copy' of the vanished personality.

In his *Impressions finales d'un psychiste*, William James stated that from all his experiences he drew one conclusion 'as certain as a dogma': 'our lives are like islands in the sea or trees in the forest. The maple and the pine can communicate by the murmurs of their leaves, and Connecticut and Newport can each hear a call of alarm from the other. But the trees also interlace their roots in the soil and the islands are joined to the bottom of the sea. In the same way there is a continuous cosmic consciousness against which our individuality sets up accidental barriers and in which our minds are plunged as in a reservoir . . . '.

When the great philosopher summarized his ideas in this metaphor he realized that its translation into scientific terms would present many difficult problems.¹

295 *Broad's Theory*

In spite of the British prejudice in favour of survival, the difficulties encountered in interpreting clairvoyant phenomena forced them, according to William James, to consider other hypotheses. Having studied the phenomena of two of the best English subjects, Mrs Leonard and Mrs Willett, Professor Broad suggested a compound theory which is a variant of James's.²

According to this the mind is due to the union of two factors, the 'psychical' and the 'bodily'. The psychic factor is like a chemical element as yet undiscovered. So far this is the old theory of the body and the soul. The great difference is that Broad's psychic factor is not a soul or a mind, but the non-material basis of the thoughts and feelings of the living individual. At death this factor would persist for a certain indefinite time (which excludes the religious belief in immortality), and it could be intercepted by a medium in trance, thus giving the illusion of being the spirit of the deceased.

This theory was inadequate to explain the 'cross-correspondence' phenomena. Broad adopted the opinion, which we have already explained, that these messages were telepathic in origin, Mrs Verrall being the unconscious centre of them. This theory is based on the following facts: subconscious elaboration and solution of a problem

¹ Cf. Sudre's edition of the parapsychological works of William James, *Etudes et réflexions d'un psychiste*, Payot, Paris, 1924.

² *The Mind and its Place in Nature*, p. 538.

in which someone is very interested; telepathy between the subconscious minds of several people; and the tendency of the subconscious mind to provide the conscious with justification. Professor Broad concluded: 'I do not see why we should find it more probable that the discarnate spirit of a dead person should exert selective telepathy than that this should be done by the subconscious mind of a living member of the S.P.R.'

296 *Tyrrell's Objections*

These extremely logical reflections of the distinguished philosopher were discussed by Tyrrell with special reference to Mrs Willett's communications.¹ The Myers psychic factor, he said, makes a different union with the subject's subconscious according to the conditions of the trance. Sometimes she seemed completely 'controlled' by Myers, who spoke through her mouth, and sometimes she seemed to receive communications through her usual 'control'. Mrs Willett's phenomena sometimes also took a third form, which according to Tyrrell completely invalidates Broad's theory. This was the form in which the subject delivered telepathic messages while retaining the autonomy of her organism. The psychic factor, if it were really united to the subject's mind, would assert itself completely and would not permit a parallel personality to appear.

Thus we must, according to Tyrrell, return to the theory of prosopopesis, according to which the medium constructs personalities using all the normal or paranormal information he possesses. But he declared, a little rashly, that the dramatizations of good mediums were distinguished by their naturalness. We would reply that there are not two classes of mediums, those who play a part and those who speak naturally. All mediums play a part, but as in the theatre there are excellent and mediocre performers. The subconscious imagination may be more or less artistic in its subliminal creations, but these are differences of degree and not of kind. The convincingness of a medium's personalities depends on the quality of the medium, both in clairvoyant faculty and in skill in interpreting the various characters.

III. KNOWLEDGE OF THE FUTURE

297 *The Illusion of 'Pure Duration'*

Precognition has been established by experiment. 'Twelve years of

¹ 'Science and Psychical Phenomena', op. cit., p. 306.

personal experiments with a large number of clairvoyant subjects and on an impressive number of persons have given me an absolute certainty,' wrote Osty, 'that there are human beings capable of foreseeing the future. Of this I am as certain as I am of the existence of what we call the earth, the sun, the stars, minerals, vegetables and animals. It is a fact verifiable by experiment and our prejudices will not long prevail against it, now that our men of science have the courage and curiosity to study it.'¹

This precognition, which includes both living inanimate things and which often includes insignificant details, contradicts the philosophies of contingency. Experience forces us here to part company with Bergson. He distinguished time from duration and regarded the latter as of an absolute reality, although he did not define it satisfactorily. Duration, according to him, is 'a qualitative multiplicity bearing no resemblance to number; an organic development but not an increasing quantity; a pure heterogeneity at the heart of which there are no distinct qualities'. To feel this unknowable thing in oneself an intense mental effort is necessary to throw oneself into the depths of one's consciousness; then one is withdrawn from space and causality one is truly free. But it is not easy to make this plunge into the absolute, as Bergson himself admitted, and it can only be instantaneous. This is why, he concluded, we are seldom free. Intuitive metaphysics evades the grasp of the intellect, and one is never sure whether one is dealing with inexpressible realities or with auto-suggested illusions. Only experience can decide the question.

For Bergson nothing is foreseeable except in the physical domain; as for example the occurrence of an eclipse or the reaction between two chemical substances, since in these phenomena only scientific time is concerned, the time given by clocks, which can be reduced to coincidences in space. Where there is real duration introduced by a free being, precognition becomes not only impossible but contradictory. 'When one asks if a future action could be foreseen one is unconsciously identifying the time with which one deals in the exact sciences, which can be reduced to a number, with real duration, the apparent quantity of which is in fact a quality, and which could not be shortened by an instant without modifying the nature of the events it contains. . . .'² 'There could be no question of cutting short the duration to come in order to represent the pieces to

¹ 'La connaissance supranormale', op. cit., p. 177. ² *Durée et simultanéité*, p. 151.

oneself in advance; that duration can only be lived as it unrolls.¹ Psychical research, by showing that it is possible to foresee events in which human wills are concerned, invalidates this conception of time, which has been criticized on other grounds by intellectualist philosophers.

298 *The Providential Hypothesis*

The faculty of precognition is the most surprising and most difficult problem set by psychical research. The spiritists cannot solve it, for precognition by the dead is no more comprehensible than by the living. It is true that they give precognition a providential character. Certain individual or collective events are preordained by the spirits to serve the great moral purpose to which they are devoted. This provides an explanation of 'tutelary' premonitions; the spirits warn us because they do not want to lose us but to give us a lesson. To this theory one may reply with Maeterlinck: 'Either these beings predict to us a misfortune that their predictions cannot avert, and in this case what is the use of predicting it; or if they announce it to give us the means to prevent it they do not really see the future and they predict nothing, since the misfortune may not take place; so that in either case their action seems absurd'.² When the spiritists do not appeal to the idea of the providence of the spirits, they fall back on reincarnation. When a spirit is reincarnated it imposes on itself certain trials to expiate the sins of a preceding life, to lose a child or his fortune, for example; then the spirit forgets the programme it has mapped out, but the law of oblivion is not rigorous and he may remember an event or have a presentiment of it before it happens. We shall spend no more time on such explanations which have no scientific or philosophical foundation.

Before we start to discuss the problem, we should point out a fallacy which certain spiritists use in order to retain the freedom of the will. They describe an observer at the top of a mountain watching a traveller in the plain below, and ask how the fact that the observer sees the traveller's movements is opposed to the idea that the latter has free will. 'To see an event which has not yet happened,' said Flammarion, 'has no effect on that event. What is to be is seen in the same way as what has already been. If will, whim, or circumstances had led to something different, one would have seen that

¹ *Ibid.*, p. 173.

² M. Maeterlinck, *L'Hôte inconnu*, p. 131.

something different. Freedom is no more affected by knowledge of the future than by knowledge of the past.¹

The metaphor of the observer and the traveller is inaccurate because it relates to two simultaneous events, and thus eliminates the factor in question, which is the elapsed interval of time. The comparison of seeing the past with seeing the future is also wrong, because this evades the question of the sense of the time interval. We know that time is irreversible in physical experience. If one can find a past event again, it is because one has left on it a trace, either material or spiritual; but a future event cannot project itself into the present unless it is predetermined, which the spiritists deny. One could not precognize an event which might not happen. All this is obvious. To say that we possess 'a paranormal faculty of precognition' is to abandon the attempt to explain this faculty. But to deny that the future is determined as soon as it is foreseen would be to deny causality and abandon reason itself. The concept of 'synchronicity' which has been introduced into psychiatry by Jung, and which would lead to fortuitous combinations of events with emotional value being placed on the level of causality, can provide no explanation of psychic precognition. To ascribe a kind of mystical value to chance is to resign the use of one's intelligence.

299 *Omniscience of Causes*

The existence of duplicative precognition, that is to say, of precognition with the characteristics of a quasi-perception, forbids us to suppose that any part of contingency is to be found in the world of our experience, and destroys the notions of 'conditioned freedom' or 'contingent determinism' by means of which it has been attempted to salvage the idea of freedom. It is still permissible to place it in the noumenon, as did Kant, who wrote: 'If it was possible for us to know a man's way of thinking, as shown by his internal as well as external activity, and an equally profound knowledge of all his motives, even the slightest, for them to be known at the same time as all the external circumstances acting upon them, we could calculate his future conduct with as much certainty as an eclipse of the sun or moon. Nevertheless we could maintain at the same time that the man was free'.²

But remaining within time and space, Laplace's postulate that the

¹ Flammarion, *La mort et son mystère*, I, p. 318.

² E. Kant, *Critique of Practical Reason*.

oneself in advance; that duration can only be lived as it unrolls.¹ Psychical research, by showing that it is possible to foresee events in which human wills are concerned, invalidates this conception of time, which has been criticized on other grounds by intellectualist philosophers.

298 *The Providential Hypothesis*

The faculty of precognition is the most surprising and most difficult problem set by psychical research. The spiritists cannot solve it, for precognition by the dead is no more comprehensible than by the living. It is true that they give precognition a providential character. Certain individual or collective events are preordained by the spirits to serve the great moral purpose to which they are devoted. This provides an explanation of 'tutelary' premonitions; the spirits warn us because they do not want to lose us but to give us a lesson. To this theory one may reply with Maeterlinck: 'Either these beings predict to us a misfortune that their predictions cannot avert, and in this case what is the use of predicting it; or if they announce it to give us the means to prevent it they do not really see the future and they predict nothing, since the misfortune may not take place; so that in either case their action seems absurd'.² When the spiritists do not appeal to the idea of the providence of the spirits, they fall back on reincarnation. When a spirit is reincarnated it imposes on itself certain trials to expiate the sins of a preceding life, to lose a child or his fortune, for example; then the spirit forgets the programme it has mapped out, but the law of oblivion is not rigorous and he may remember an event or have a presentiment of it before it happens. We shall spend no more time on such explanations which have no scientific or philosophical foundation.

Before we start to discuss the problem, we should point out a fallacy which certain spiritists use in order to retain the freedom of the will. They describe an observer at the top of a mountain watching a traveller in the plain below, and ask how the fact that the observer sees the traveller's movements is opposed to the idea that the latter has free will. 'To see an event which has not yet happened,' said Flammarion, 'has no effect on that event. What is to be is seen in the same way as what has already been. If will, whim, or circumstances had led to something different, one would have seen that

¹ *Ibid.*, p. 173.

² M. Maeterlinck, *L'Hôte inconnu*, p. 131.

something different. Freedom is no more affected by knowledge of the future than by knowledge of the past.¹

The metaphor of the observer and the traveller is inaccurate because it relates to two simultaneous events, and thus eliminates the factor in question, which is the elapsed interval of time. The comparison of seeing the past with seeing the future is also wrong, because this evades the question of the sense of the time interval. We know that time is irreversible in physical experience. If one can find a past event again, it is because one has left on it a trace, either material or spiritual; but a future event cannot project itself into the present unless it is predetermined, which the spiritists deny. One could not precognize an event which might not happen. All this is obvious. To say that we possess 'a paranormal faculty of precognition' is to abandon the attempt to explain this faculty. But to deny that the future is determined as soon as it is foreseen would be to deny causality and abandon reason itself. The concept of 'synchronicity' which has been introduced into psychiatry by Jung, and which would lead to fortuitous combinations of events with emotional value being placed on the level of causality, can provide no explanation of psychic precognition. To ascribe a kind of mystical value to chance is to resign the use of one's intelligence.

299 *Omniscience of Causes*

The existence of duplicative precognition, that is to say, of precognition with the characteristics of a quasi-perception, forbids us to suppose that any part of contingency is to be found in the world of our experience, and destroys the notions of 'conditioned freedom' or 'contingent determinism' by means of which it has been attempted to salvage the idea of freedom. It is still permissible to place it in the noumenon, as did Kant, who wrote: 'If it was possible for us to know a man's way of thinking, as shown by his internal as well as external activity, and an equally profound knowledge of all his motives, even the slightest, for them to be known at the same time as all the external circumstances acting upon them, we could calculate his future conduct with as much certainty as an eclipse of the sun or moon. Nevertheless we could maintain at the same time that the man was free'.²

But remaining within time and space, Laplace's postulate that the

¹ Flammarion, *La mort et son mystère*, I, p. 318.

² E. Kant, *Critique of Practical Reason*.

present state of the universe is an effect of its previous state and the cause of its future state seems to be justified by psychical research. In the first place we should examine the hypothesis of omniscience of causes which was clearly stated by Laplace: 'If there were an intelligence which, at a given instant, knew all the forces in nature and the respective positions of all the objects it contains, and if it were vast enough to analyse these data, it could include in the same formula the movements of the largest bodies in the universe and those of the lightest atom; nothing would be uncertain to it and the future as well as the past would be present to its vision'.

Can we suppose that the clairvoyant's mind is capable of knowing all these forces directing the universe, and following their effects up to the point where they produce the event predicted? This would be to ascribe to his mind an omniscience which metaphysics reserves for God. We might accept, it is true, that this omniscience is limited to a small group of causes; thus the clairvoyant act would be a sort of 'vision in God'. Oesterreich, following Brentano, boldly re-stated this hypothesis, which can hardly solve the problem. It has at least the merit of not concealing the data, as do certain spiritists who claim that spirits in the Beyond can see the interaction of causes weaving destinies. Those who hold this view forget that the whole universe is concerned in the destiny of a man as in the fall of a leaf. A gesture affects gravitation, a grain of sand can change the face of the world. An iceberg melting in the Polar seas can modify the wind which blows a tile off the roof on to the head of a man and kills him; on the other hand, a thread on his sleeve might delay him a second, thus saving his life. When we think of the spreading ripples of cause and effect round these two tiny facts, and of the infinite number of tiny factors concerned in the fall of the tile, we recognize the profundity of Pascal's saying: 'I hold it as impossible to know the parts as to know the whole'.

300 *The Eternal Present*

Another, rather more satisfactory, theory was sketched by Myers as follows: 'Few men have given much thought to these problems of the past and future without wondering if past and future are really more than words; and if we are not regarding as a stream of consequences what is really only an ocean of coexistences'. Thus, the future would not be virtually contained in the present because of the law of causality, it would really coexist with it. But where?

There is only one space and it is filled by the universe. Thus we are led to conceive of a hyperspace in which the fourth dimension is time, containing the successive universes of duration.

This four-dimensional space has been familiar to mathematicians since the work of Riemann. It is not an invalid hypothesis, and can be fairly easily imagined. Poincaré described imaginary two-dimensional beings, conscious but without thickness, living in a plane. Space, to them, is this plane and they cannot imagine leaving it. To make them understand our three-dimensional space we would have to present it to them successively, cutting it into slices like the leaves of a book and making it pass through their plane so that each of the slices was in it in turn. If these curious beings included clairvoyants, these would have the ability to penetrate into the third dimension and mentally turn the pages of the book, thus seeing the past or predicting the future. There is nothing in this opposed to our sense of logic, except for the idea of possessing insight into an additional dimension, but this is a fact we may be forced to accept.

This hypothesis, which makes time a fourth dimension of space, was formulated very clearly by d'Alembert in the *Encyclopaedia*. This could be called the *space-and-time* hypothesis to avoid confusing it, as certain mathematicians do, with the *space-time* hypothesis of Einstein and Minkowski. In the latter time is not homogeneous with the other dimensions of space. It is distinguished by an imaginary coefficient ($\sqrt{-1}$) and it is a sophistication to say that this number is a sign that the time coordinate has an extensive character in any direction in space.

It is of space-and-time and not of space-time that we can say with Eddington:¹ 'Events do not arrive; they are there and we meet them on our journey; the "formality of taking place" is simply the indication that the observer, in his voyage of exploration, has passed into the absolute future of the event in question, and is of no great importance'.² H. Weyl similarly wrote: 'It is consciousness alone which, moving in a field of this universe, registers the section which reaches it and leaves it behind as history, like a process which unrolls in space and develops in time'.³

¹ A. S. Eddington, *Space, Time and Gravitation*, p. 15.

² H. Weyl, *Raum, Zeit, Materie*, p. 249.

³ In the *Introduction à la métapsychique humaine*, I accepted the interpretation of the relativistic physicists. I have since recognized that it was unwarranted to derive the theory of the 'eternal present' from the mathematical formalism of Relativity.

301 *Bergson's Objections*

Bergson, whose philosophy of duration was dealt a death-blow by Einstein's theories, defended himself ingeniously in his last work, *Durée et simultanéité*. The basis of his criticisms is that the relativist is continually confusing 'time thought' and 'duration lived'. But if we reject this mystical postulate and return to considering time as it has been considered in philosophy since Kant, all Bergson's objections fail. The objections which would be valid are those based on material rather than spiritual considerations. We know that a clock slows down when it travels faster; does it result from this that the speed of a chemical reaction is decreased, that the beating of the heart slows down, and that physiological and psychological functions are modified? These are the things which should be questioned, if we wish to contest the extension of relativity to the world of our senses. But it is not justified to oppose a theory of the physical order, that is, justifiable by experiment, by a metaphysical theory based on a more or less vague feeling of an intimate 'reality'.

Apart from his general criticisms, Bergson made some particular criticisms of the space-and-time theory. He complained that it was 'something less and something more than reality'. It subtracted something from reality because it substituted an 'accomplished' for a 'becoming'. This is again the same argument of spatial time and progressive duration, and, as we know, it can be rejected without offending reason or experience; but it is here particularly specious. The theory of space-and-time asserts, in effect, that the mind does not embrace a complete reality, but successive aspects of that reality and therefore seems to be moving through time. The principle of usefulness to which Bergson referred so often in his discussion of perception, might enable us to say that the illusion of becoming arises from the fact that the mind only takes of reality what is necessary for its immediate action; it apprehends only the present instant as it apprehends only the surface film of objects. Time and space are equally limited in usefulness; we cannot occupy all space any more than we can extend ourselves over the whole of time. The argument has as little value here as it has in the case of perception.

In the second place, space-and-time represents more than reality, according to Bergson, because potentially there are infinitely many ways of projecting it into the space in which we normally live, and in reality only one of these projections takes place. The argument

can be reduced to the problem of distinguishing fact from potentiality and could be applied to all categories of our experience. It is not, for example, theoretically impossible that one should derive from a certain quantity of heat its exact equivalent in energy; however we know that in practice this is not possible. The way in which permanent reality is projected into our space is a datum which we have to accept, as is that of perception. There was an infinity of possible universes; only one has been prescribed. It may be that the representation of time as a fourth real dimension of space is not adequate, but its deficiency is the same as the deficiency of the potential in comparison with the actual and cannot be used as a philosophical objection to the theory. The thing which we feel to be most repellent about this theory is that the four-dimensional world is a completed and static world in which there is no motion and nothing can happen.

302 *The Theories of Dunne and Broad*

Two English writers have suggested the addition of higher dimensions to our sensory universe. Dunne likens consciousness to a ray of light exploring a four-dimensional world.¹ But this takes place in a real time, analogous to that of our experience. To take this into account, we must imagine another consciousness, that of the supernormal state, which is displaced in a fifth dimension to apprehend the events of the four first dimensions. Dealing with both the past and the future of the individual, it could create anticipatory dream images. This second consciousness must also be given a real time, hence we must have a sixth dimension of space and a third consciousness to know it. In this way one proceeds to infinity, and it is certainly this part of the argument which has led to Dunne's theory being rejected as fanciful, although it had a certain success before the war.

Broad, who criticized this theory, suggested a simpler hypothesis, that of two dimensions of time. 'With a second temporal dimension,' he wrote,² 'events which are separated in one dimension may be conjoined in the second without discontinuity, as two points on the earth may have the same latitude but different longitudes.' Causality, which requires that x should be before y to be called its cause, would then be evaded in the second dimension even if x was after y .

¹ J. W. Dunne, *An Experiment With Time*, London, 1927.

² C. D. Broad, 'Mr Dunne's theory of time', in *Philosophy*, Vol. 10, No. 38.

The clairvoyant could thus perceive an event before it had reached his waking consciousness.

Price criticized this theory from the realist point of view. It would result from this hypothesis, he said, that we would be affected by events before they happened in the normal way. Thus we could be dead in time number 2 and still alive in time number 1. Further, the two parts of things would be able to change in an unco-ordinated way. In order to retain the hypothesis, we should have to accept that the future is only known and not acted upon.

303 *Eternal Recurrence*

Nietzsche placed at the apex of his philosophy this curious theory which would explain even better than the space-and-time theory the phenomena of precognition.¹ Like relativity, it assumes a finite universe. The sum total of the forces in the universe is thus finite and constant, while time is infinite. These forces will never reach equilibrium, for if this were possible they would have already reached it in the eternity preceding us, and the world would have remained static; but in fact it is evolving. These forces obey a strict determinism. The natural forces then combine according to the laws of chance and, however numerous they may be, the number of possible combinations is limited. Eventually certain of these combinations must be repeated and hence all those subsequent to them. Hence evolution will pass through the same phases and the universe will be cyclic.

Nietzsche concluded: 'Every combination of events which can be produced has already been produced, and not only once but an infinite number of times. This is true of the present moment: it *has already been* and will be again when all forces are distributed exactly as they are today; it is the same with the moment which gave rise to the present one and the moment to which the present will give rise. Oh man! your life will recur repeatedly like the flow of an upturned hour-glass, each existence being separated from the next only by the enormous instant of time necessary to reproduce in the universal cycle the circumstances which produced your birth . . . '.

There we will end the quotation, which goes on to become lyrical. It is interesting that a serious professor at the Sorbonne, Abel Rey, has taken up the theory again and attempted to apply it to all the

¹ Nietzsche, *Sämtliche Werke*, XII, p. 122.

scientific knowledge acquired since the time of Nietzsche.¹ The laws of nature are statistical laws. In a gas the molecules are rebounding from one another at random in all directions and at varying speeds. The temperature is derived by an averaging process. But it is not impossible that one day chance might separate the molecules moving with high speeds from those moving at low speeds and we should then have in the same receptacle a hot part and a cold part. The probability of such an event is almost infinitely small, but in an infinite time its occurrence is not impossible. If the universe is composed of atoms, these atoms will one day revert to the configuration they had at some previous instant of time and the cycle will begin again.

Objections to this theory have been made by mathematicians. Emile Picard questioned the validity of the reasoning² and Emile Borel showed that some probabilities are so small that they are equivalent to a certainty of impossibility.³ We must abandon the 'scientific daydream' of Eternal Recurrence.

304 *The Influence of Purposiveness*

We must now mention a very original paper by Gabriel Tarde, published in 1901.⁴ It was presented merely as a criticism of the scientific law of causality. The work was entitled *The Effect of Future Events*. It was remarkable, Tarde said, that in science 'we always look for a previous event to support the subsequent event and never *vice versa*'. He went on to expound his very daring thesis. 'It seems to me neither more nor less conceivable that the future, which is not yet, should influence the present than that the past, which is no more, should do so.' The idea of action at a distance through time, analogous to Newtonian attraction, seemed to Tarde unavoidable.

Determinism, then, must be able to work in reverse. We must be able to explain, at least partially, the motion of the nebula by the gravitational attractions of the planets which it will eventually become, the planet by the life which will arise on it, the leaf by the flower, the child by the man, the lower by the higher. Our tendency to explain the future by the past arises from the fact that only the past is known. For Tarde it is erroneous to conceive time as direc-

¹ Abel Rey, *Le retour éternel et la philosophie de la physique*, Flammarion, Paris.

² Cf. Sudre's *Nouvelles énigmes de l'univers*, 2nd edn., p. 166.

³ E. Borel, *Probabilité et certitude*, Presses universitaires, Paris, 1950.

⁴ *Revue de Métaphysique et de Morale*, Part IX, p. 119.

tional or to imagine it as a dimension of space. There is no inconsistency in reversing the 'direction' and seeing the past as deriving from the future.

Purposiveness plays a role in the phenomena of life which is perhaps more important than that of heredity. The embryo is explained by the adult creature. Evolution would be incomprehensible without purposiveness for it shows changes occurring, not at random, but seemingly in accordance with a directing idea. When events diverge from an initial event, we may accept that the future is simply a development of the past. But when several series of events converge towards one important event, this future event has exerted an influence.

This strange idea does not completely resolve the problem of precognition, but it provides a rough sketch of a solution, by removing the theoretically impenetrable character of future events.

305 *The Confusion of the Modes of Time*

Another weakness of the eternal-present theory is that it explains clairvoyance by a quasi-perception of the real, where it would seem more fitting to a parapsychological theory to remain on the mental level. Considering only divination of the past, there are two possible processes: this quasiperception of a still present reality, or an exploration of memory. In this connection William James's theory is much more satisfactory.

On the other hand, certain features of clairvoyance are explained well by the eternal-present: for example, the cinematographic character of the visions, which was pointed out by Osty, and the confusion of different modes of time. The subject sees coloured moving pictures centred on the person upon whom he has concentrated his attention. It is as if developing reality was seen from different angles, through a magic window. Sometimes the glass is clear and the vision perfect, sometimes it is cloudy and the indistinct or distorted image has to be interpreted; instead of remaining a picture it becomes an abstract idea or a symbol.

The second point is that subjects often confuse the past and the future; they announce as past a future event and *vice versa*. I have had excellent personal experience of this with Pascal Forthuny. In the presence of someone he did not know, he described events in his past life which were recognized as precisely correct. Then he described another which the person said he could not remember.

This event was very complicated (someone falling down a staircase, a funeral passing, another person falling outside, and so on). It happened the following day exactly as he had described, and was witnessed by several people other than the person concerned. Thus recollections do not appear to bear the temporal stamp of which Bergson speaks.

We must end this discussion of precognition by admitting that this phenomenon is still a scientific mystery. None of the hypotheses which have been put forward is completely satisfactory. To appeal to 'vision in God' is outside the scope of science, besides which it revives the interminable arguments about determinism and free will. Let us be content to assert the reality of a law of nature, certainly an exceptional one, but one which must enter into any metaphysical attempt to explain the universe, even if it is beyond the reach of the intellect.

CHAPTER XII

THE MIND IN NATURE

306 *The Evolutionary Point of View*

Almost all the writers who have discussed psychical research have confined themselves to considering it in connection with the human race. It has not apparently occurred to them that these abnormal phenomena might also occur elsewhere.¹ This narrow view arose from the prejudice that psychic phenomena demonstrate the workings of a marvellous power, superior to intelligence, and proving the survival of the soul. The whole of Myers's book, which is still the Bible of British psychical researchers, is inspired by this belief. His theory of a subliminal self, which co-ordinated all the observations made of the unconscious life of the mind, was certainly new and very important. While the psychologists of Pierre Janet's school placed below the threshold of consciousness only low-level automatic actions, Myers also saw there layers which gave rise to the phenomena of genius, intuition, telepathy and telaesthesia. On this level the mind acts autonomously, escaping the limitations of organic life. This independence led to the assumption that human personality survives bodily death. Thus psychical research was supposed to give scientific support to religious teaching.

Dr Gustave Geley, who had been especially impressed by physical phenomena, found the evolutionary point of view inescapable. He saw the same process at work in the metamorphoses of insects as in teleplastic materializations. He even recognized, while opposing Bergson's theory, the identity of the subconscious nature of man and animals. His mistake was in seeing the subconscious mind as an occult consciousness which was gradually unveiled in the course of

¹ When I published in 1925 my *Introduction à la métapsychique humaine*, Charles Richet asked me why I had qualified the word 'métapsychique' by the adjective 'humaine'. Did it not go without saying that everything paranormal was human? Even at that time I was convinced that any view of the subject would be almost useless unless it saw the paranormal at work in evolution.

evolution. He regarded consciousness as the highest achievement of evolution. His 'dynamopsychism' is only the *Deus ex machina* which makes certain this continuous change, and leads to the triumph of the 'highest good'. In fact Geley's moralism leads to the same result as Myers's theism — the justification of spiritism.¹

307 *The New Biological Philosophy*

The true biological philosophy will be free from the prejudices we have just described and will integrate psychic phenomena with the rest of nature. Then perhaps our minds will no longer be shocked by them. It will be seen that they are related to instinct, which Bergson rightly contrasted to intelligence, showing that, in spite of its limitations, it represents something much more profound; if we could understand it, it would give us the secret of life itself. 'There are things which only intelligence is capable of seeking, but which alone it will never find. Only instinct could find these things, but it will never seek them.' However discouraging this idea may be for a parapsychologist, in search of an unattainable explanation of the phenomena which we have described in this book, it does not leave us so disconcerted by them, for these phenomena are no more miraculous than those which have always been described by naturalists. Enumerating them will restore confidence to these lost children of scientific research who are the laughing-stock of laboratory scientists.

Telepathy is observed among the higher animals; we shall quote some famous examples later on. And can we not accept as a clairvoyant phenomenon the sense of direction possessed by many animals; homing pigeons offering the most perfect example? No satisfactory physical explanation has been given for their return to the nest. Then again, a glance is sufficient to reveal in animal societies a striking example of that collective psychism which is one of the most fundamental facts of human paranormal phenomena. The resemblance is not superficial; there is no more profound mystery than the behaviour of bees, ants and termites. Equally profound mysteries are the adaptation of insects and flowers, which amazed Darwin, the mimesis of several animals which strongly suggests a connection with the law of psychic ideoplasty, and which writers are unwilling to include in treatises on biology, except to belittle its importance.

¹ Cf. 'De l'inconscient au conscient', op. cit.

These are perhaps the most curious parts of biology, but we should also study all the contrivances of instinct, beginning with the organic tools which suggest a purposive idea. We cannot discuss all these analogies in this book, but shall limit ourselves to a brief survey. We only wish to point out the metapsychic influence, in the form of instinct, permeating the entire vegetable and animal kingdoms. Biologists attempt to eliminate any hint of the wonderful from natural phenomena and to arrange them in a convenient framework. We shall attempt, in the true spirit of science, to point out the facts which resist the orthodox interpretations, but which no one dares to call unclassifiable.

I. TELEPATHY AND CLAIRVOYANCE IN ANIMALS

308 *The Elberfeld Horses*

It appears that at least the higher animals possess psychic faculties (in the ordinary sense of the word). It has long been known that animals could be hypnotized. In the seventeenth century P. Kircher described how a cock could be hypnotized by holding it for some time before a chalk line drawn on the ground. Czermak hypnotized sparrows, pigeons, rabbits, and even salamanders and cray-fish. The method which succeeds best with many kinds of animals is that of cutaneous stimulation, either brief and intense or slight and repeated.

Telepathic communication between man and animals has been observed and reproduced experimentally. Dogs, cats and horses appear to see and react with fear to certain objective phenomena such as phantoms, sometimes before a human being who is also present; but this is only a question of receptive sensitivity. When a dog barks at the time of his master's death, in conditions which exclude knowledge of it by normal sensory means, we must suppose he has some dim presentiment. There are no certain cases of physical phenomena produced in the presence of animals. As for the animal phantoms which have been seen in haunted houses or at experimental séances, they obviously provide no evidence for the existence of a faculty in animals.

The most famous case of animal telepathy is that of the Elberfeld horses which all European psychologists were invited to see and test in 1912. In a paper read to the Paris Conference of psychical research,¹ their trainer Karl Krall of Munich described these

¹ 'Denkende Tiere', in the *Report* of the Conference. This is also the title of a book by Krall which was published at Leipzig in 1912.

fascinating experiments, rejecting the suggestion that they had been trained in the use of signals. Indeed, the same phenomena were obtained with a blind horse. Von Osten had already produced in 1904 a horse called 'Clever Hans' which he had taught to count, work out sums, spell, and distinguish between different people, colours, sounds, coins, and so on. His collaborator Krall perfected these methods with new horses which, as foals he taught common German words and arithmetic. The horses tapped with their hoof to indicate numbers, units being indicated by the right hoof, tens by the left and hundreds again with the right. The horses were quicker to understand and progress than human schoolboys.

Krall taught them the alphabet and they answered questions phonetically; for example, S N meant *essen*, to eat. Of the eleven horses whose education Krall undertook, some were much more intelligent than others and three were rebellious. Mohammed showed an extraordinary gift for mathematics; he would solve in his head in a few seconds problems for which schoolteachers needed fifteen times as long, working on paper. In this way he gave the square and even the fourth root of numbers presented to him. When the roots were not whole numbers the horse kept his hoof raised from the ground and refused to go further.

309 *Comparison with Calculating Prodigies*

We should recall at this point the achievements of the calculating prodigies, usually uneducated, whose subconscious minds are capable of solving difficult problems instantaneously. In the nineteenth century, for example, there was Mangiamel, who was presented to the Academy of Science by Arago, and Mondeux, who was presented by Cauchy. Inaudi was perhaps the best known. The great mathematicians Darboux and Poincaré were very intrigued by him. The latter gave him the following problem: Square 4,801, subtract 1 and divide by 6; what is the square root of the quotient? Inaudi gave the correct answer in a few seconds. He could learn a 24-figure number in a minute, carry out sixty operations in succession, multiply 6-figure numbers, and extract sixth and seventh roots. He was rivalled by a Greek named Diamandi who was studied by Alfred Binet.

We should also mention an impoverished blind man named Fleury, who took fifteen seconds to extract the cube root of a 6-figure number and could calculate without fatigue for seven hours.

Mlle Osaka had no gifts but that of memory, which, however, was prodigious. She could repeat twenty numbers, each of 24 figures, which she had read in a list. I was present when another prodigy, Dagbert, was presented to the Academy of Science in 1945; he was as gifted as Inaudi. No doubt all these calculators use tricks of memorizing and calculation, but they possess more than a photographic memory. Their speed is often greater than that of computing machines (as Maurice d'Ocagne observed) and shows a truly supernormal subconscious faculty, functioning without the laborious processes of the analytical intelligence. The case of Gauss who, at the age of seven, without having learnt the rules of arithmetic, astonished his teachers, gives clear proof of this.

310 *A Higher Arithmetic*

To show the connection of these phenomena with clairvoyance, we shall now describe some experiments which took place at Brussels in 1915, in a small circle at M. Poutet's house, in which vertiginous heights of calculation were reached.¹ The subject was a distinguished barrister who did not believe in spirits but could put himself into a state of light hypnosis, producing a secondary personality called Stasia. Two of the experiments were as follows. In one of them the eight members of the circle each drew a card from a pack and laid it on the table. The first was found to be the ace of clubs, the last the nine of spades. On Stasia's instructions the numbers corresponding to the order of each letter were added and written down, which gave a 12-figure number. This was divided by 125, fractions being omitted, which gave 93189. The 1 was left out and replaced by a 9. The subject dictated by means of raps a 19-figure number which was multiplied by 93989. The result, a 24-figure number was divided into sections of 1 or 2 figures at a time, giving each section its corresponding letter as before (the five last figures not being used), and this, as if miraculously, gave 'Nine of spades Stasia' — the value of the last card drawn at random! How are we to account for this improvised subconscious arithmetic?

Now for another of Stasia's achievements. Poutet drew a playing-card and shut it in a drawer without anyone having seen it. He was asked to write his Christian name, 'Henri', and to turn it into figures as above. The number formed was multiplied by a dictated 14-figure number (Stasia correcting a mistake). The 14 last figures

¹ *Ann. des sc. psych.* 24-5, 1919.

of the number obtained, translated into letters, gave 'nine of hearts', which was the value of the unknown card.

William Mackenzie experimented with the same subject in 1921, taking the most rigorous precautions against possible fraud, and obtained results no less astounding. In each experiment the data at the start of the experiment seemed to be determined by pure chance. The details are to be found in Mackenzie's *Metapsichica moderna*.¹ He could not formulate any explanation, though he observed collective psychism between the subject and three members of the circle who were all good mathematicians.

311 *Mannheim's Dog*

This psychical researcher was particularly interested in the problem of animal clairvoyance. He experimented with the Elberfeld horses and was convinced of the genuineness of the phenomena. In a book called *New Revelations Concerning the Animal Psyche*² he described his experiments and those of others, so as to provide a complete survey. Like Maeterlinck³ he regards the hypothesis of fraud as ridiculous, if only from the point of view of the vertiginous speed of the replies and the nature of the problems set. But this hypothesis is finally invalidated by studying the way in which the replies are given. The phenomenon is not even comparable with that of 'thought transmission' between a man and a horse, but with that of psychic association between the subconscious minds of sitters in table-turning circles. In fact Mackenzie likens the horses to living four-legged tables.

In the book mentioned he described analogous experiments which were carried out with Rolf, Mannheim's dog. Like the horses, this intelligent terrier tapped out with his left foot the answers to little arithmetical problems, but he solved these problems, which were sometimes fairly complicated, much faster than his questioners. Gradually Mme Moekel, his mistress, taught him a correspondence between objects and numbers, so as to establish a rudimentary language with him. She even succeeded in connecting numbers with letters so as to form words. To make the communication of numbers less tedious she taught the dog to tap the tens in a slightly different way, with pauses. The language used was a German dialect which

¹ *Libreria di scienze e lettere*, Rome, 1923.

² *Nuove rivelazioni della psiche animale*, Formiggini, Gènes, 1914.

³ *L'Hôte inconnu*, Fasquelle, Paris, 1914.

was spoken in the Moekel family. Like the Elberfeld horses, Rolf gave words in a phonetic form without having been taught to do so. Apart from his mathematical achievements, his messages were like those of a small child, emotional or utilitarian, but sometimes with a hint of malice. He replied intelligently and sometimes humorously to Mackenzie's questions; said he liked brightly-coloured pictures; and was able to extract the simple cube roots. His psychology, on the whole, seemed to be different from that of the horses.

312 *Other Experiments With Dogs*

The case of Rolf is not isolated and other remarkable dogs have been studied; for example, Mlle Kindermann's Lola, Mme Borderieux's Zou, and Professor Ziegler's Awa. In 1924 Bechteref carried out telepathy experiments with a fox-terrier and a St Bernard. Taking the dog's head in his hands he mentally commanded him to carry out a certain familiar action and the animal obeyed, sometimes fumbling as if the idea had not been completely grasped. In a series of experiments carried out by Dr Flexor at Moscow the dog carried out, not the order he had just received, but the order given in a subsequent experiment. We know that similar displacements, either forwards or backwards, often occur in experimental telepathy.

Krall emphasized that Bechterof's dogs only obeyed a mental suggestion (which is remarkable enough), but that his horses showed, by their unpredictable and capricious replies, a genuine emotional and intellectual personality. Further, their subliminal imagination and intelligence were astonishing. It was easy to see from the way in which they gave a mathematical solution whether they were certain or suspected an error. This evidence supports the idea of an animal psyche analogous to that of man and just as powerful paranormally. 'It is not surprising,' Maeterlinck wrote, 'that in animals these subliminal faculties not only exist but are perhaps keener and more active than in us, since our conscious and abnormally individualized life atrophies them and relegates them to a neglected idleness in which they have increasingly rare opportunities to function. . . .'

313 *Direction-Finding in Animals*

A human being finds his direction by reference to the sun and various landmarks. It is the same with higher animals, except when they are removed experimentally from their usual neighbourhood

and left to find their way back. Several experiments have shown that many animals can return home from a considerable distance, and we cannot explain by what they are guided. We may then ascribe it to instinct, which explains nothing, or we may invent a physical explanation which is too complicated to sound probable. A psychical researcher sees these phenomena as examples of clairvoyance. It may be said that this hypothesis explains the mysterious by the more mysterious, but it is an advantage to place a group of facts in relation to a large body of other facts with which they are seen to be analogous.

Fabre quoted some cases of cats who were taken by carriage or railway to a distance of some kilometres from their home, and returned by the shortest route, even swimming across a river without using the bridges.¹ Similar returns have been reported with dogs and even horses. Bourlière states that the finest homing experiments have been done with bats, which only fly by night. They are reported to have covered a distance of 45 kilometres in 24 hours.² The murine, which has returned from distances of 100 and even 200 kilometres, holds the record. The murine also flies only at night. Among mammals, Stickel published a report on the rodent *Peromyscus*. A large scale experiment was carried out in a forest, over an area of 9 hectares. Eighty-two per cent of the animals returned to their burrows, covering distances between 150 and 200 metres, which is four or five times the radius of activity of this little animal. In one of the individual experiments a young one was taken to unknown territory 3 kilometres away, and returned in less than 48 hours. Professor Bourlière regards the usual hypotheses as inadequate.

Neuhaus carried out experiments with mice in a dark maze. When the mice were put in at the centre of the maze they always went towards the South, where there was an exit from the maze, and they continued to do this even when the apparatus had been turned round. The psycho-zoologists were unsuccessful in the attempt to find a 'magnetic sense' which did not respond to strong magnets, but Neuhaus gave the key to the secret in the fact that the mice had been brought up in a cage to the South of the maze. The sense of smell could not have been the cause of their moving towards it.

¹ I had a personal experience with a cat which I tried to lose in the woods, but which returned home in under two days.

² F. Bourlière, *Vie et mœurs des mammifères*, Payot, Paris, 1951, p. 160.

314 *Homing Pigeons*

The direction-finding of homing pigeons has attracted the greatest attention and many fruitless explanations have been offered of it since the time of Darwin. Young pigeons are trained for some months with an adult pigeon, making flights of 200 kilometres. Then they are taken in baskets by railway to increasing distances and released. A few may be lost but most return to the pigeon-house where they were born. Even when they are taken out to sea they return unerringly. The flights can be made as successfully by night as by day, so we cannot use steering by the sun as an explanation. The suggestion that objects emit waves is puerile. To test the hypothesis that pigeons were influenced by Hertzian waves, mass releases have been organized near a transmitting station, but this source of disturbance did not seem to deprive the birds of their ability. In any case, space is nowadays filled with waves of all frequencies, but this does not appear to have imposed any limitations on the arrangements for flights made by pigeon-fanciers.

Electromagnetic waves having been rejected, the earth's magnetic field was suggested. Even if pigeons could perceive this weak field, another factor would be necessary to steer by. The American Professor Yeagley released some pigeons carrying two small magnets calculated to neutralize the horizontal component of the earth's field, and observed that the birds with the magnets were not so successful in returning to the nest as the others. He concluded from this that the earth's magnetic field was one of the factors concerned. According to him, the other factor was the variation in the Coriolis force caused by the rotation of the earth. He suggested that the pigeon combines these two factors in his nervous system, and guides himself accordingly. This ingenious theory has not stood up to the criticisms of it made by physicists. Hence this problem, like that of providing a physical explanation of telepathy, remains insoluble. Whether we like it or not, we are forced to classify the long-distance direction-finding of animals with the phenomena of clairvoyance.

315 *The Bees' Dance of Communication*

To show the unsatisfactorily complicated nature of the explanations given by those scientists who are unwilling to accept psychical research, we shall describe von Frisch's experiments on the direction-

finding of bees. We shall see later that communities of insects show collective psychism, which Réaumur called in the case of bees 'the spirit of the hive'. At present we are only concerned with the way in which they communicate to each other information about the places in which pollen and nectar are to be found in flowers. Experiments have shown that when an exploring bee finds something of interest she returns to the hive and, a short time later, a team of bees (not including the first bee) fly to the place, the number of them being in proportion to the work to be done. We have to explain how the first bee communicated the information about the quantity of food and the direction to be taken to find it.

According to von Frisch's experiments¹ the informing bee carries out a sort of circular dance on the wall of the hive, the energy of which is roughly proportional to the richness of the harvest. We might accept this, but the dance is also supposed to indicate the direction by the angle made by the axis of the ellipse in which the bee moves with the direction of the sun. Even supposing that this angle is sufficient, which requires further explanation since space is three-dimensional, the bees would have to plot their information on a plane surface like an engineer making a working drawing. This idea is too anthropomorphic to be acceptable. Finally, without going into detail, observations have been made which cannot be explained by this symbolic dance. According to Françon's experiments, the information conveyed is sufficient for a bee to find by means of it a small particle of food hidden under a pile of stones. It is evident that the direction-finding of bees can only be explained by a special sense, a kind of clairvoyance comparable with that of homing pigeons. Steering by the sun, even making use of polarized light, does not provide an adequate explanation.

II. COLLECTIVE PSYCHISM OR POLYPSYCHISM

316 *The Individual, a Relative Concept*

The important concept of collective psychism in human parapsychology corresponds to a phenomenon which can be observed in nature. The problem of human personality, which seemed so simple to early thinkers, can no longer be discussed without taking into account the way in which individuation is produced in living creatures.

¹ K. von Frisch, *Vie et moeurs des abeilles*, Albin Michel, Paris, 1955.

We see at once that a poplar, an ant and a horse are all clearly defined units and at the same time examples of a type, which we call a species. But the difficulties begin when we attempt to elaborate his intuitive concept of the individual. 'Individual' means 'something which cannot be divided.' In fact, if most living things are divided into parts, the fragments cannot continue to live. Even if one does, the others usually do not. But a slightly mutilated individual heals its wound and regains its specific form. In certain species, important organs can be completely regenerated. For example, a crab can grow a new claw and a lizard a new tail. But the remarkable thing is that if one divides an earthworm, a hydra or a sea anemone, each of the pieces will grow into a new complete animal; if one plants a willow twig or a begonia leaf, a new willow or begonia will grow. Thus, in spite of etymology, certain individuals are divisible. Indivisibility, which corresponds to a certain complexity of the nervous system, is perhaps a higher development, but not an essential property, of living things.

To this it might be replied that these observations are really observations about reproduction. Instead of being localized in a certain part of the individual, the reproductive elements are spread out. However it is divided, the individual will reproduce its specific form. This takes the problem further back, and we now have to study the various methods of reproduction. There are many. Asexual reproduction takes place by cell-division, buds, spores, and so on. The typical characteristic of sexual reproduction is the production of an egg. The individual produced by this means has a special quality, and we will call it a 'being'.

317 *The Idea of a 'Being'*

In general, the egg is the result of the fusion of two special cells, the male and female gametes, which come either from two different individuals of the same species, or from a single individual. The 'being' is the individual which comes from the egg. There is a profound difference between it and an individual which has not come from an egg, on account of the phenomenon of meiosis. At reduction, before fertilization, each gamete contains half the normal number of chromosomes. The two gametes, each containing chromosomes from one of the parents, unite to give a new individual with its own characteristics. Hence the offspring has the same number of chromosomes as the parents before reduction. We define

a biological 'being'¹ as an individual which is able to produce new characteristics in its offspring.

But we shall now see how arbitrary this definition is. In cases of hermaphroditism the same individual produces both the male and the female gamete; hence there is no combination of two genetic constitutions, and hence a 'being' is not formed. Friedel remarks that nevertheless reduction takes place, and this is sufficient to introduce new characteristics. But in parthenogenesis, which is common in both the animal and the vegetable kingdom, there is no male gamete and hence no fertilization. Is the resulting individual still a 'being'? Friedel recognizes that there is a scale of kinds of 'being' between heterogamous sexual reproduction and asexual reproduction. But this is to admit that the idea of a 'being' has no absolute value. As for its usefulness, this also is doubtful. Nature seems to be concerned only to produce individuals, and hence uses a number of methods of reproduction regardless of whether or not they give rise to 'beings'. When she can use several methods of reproduction at the same time she does so, as in the case of reproduction by seeds, which can occur in the same plant as vegetative reproduction. Besides, there is no evidence that asexual reproduction invariably conserves the heredity of the parent and does not permit variation. There is more to a creature than what one sees, even using a microscope. We must take psychism into account in the problem of heredity.

318 *The Individual and Colonies of Cells*

Biology offers another, equally disputable, point of view. We refer to the cellular theory of individuals. All living individuals are, in the final analysis, agglomerations of cells. Considering the cell as a biological unit, as is obvious in the case of the protozoa, we may say that all living things are societies of cells, or cellular colonies. The biologists of the last century constructed theories, based on this idea, which are now no longer accepted. Lacaze-Duthiers showed that, among invertebrates, the cells or *plastides* joined together to form more or less distinct small individuals, the *zoönites*. To form the complex individual, 'these *zoönites* in their turn formed a colony, either in a line, or in a two or three-dimensional mass'.

Lacaze-Duthiers's successors attempted to extend the colonial

¹ J. Friedel, *La personnalité biologique*, p. 57. We shall develop our discussion along the same lines as did this author.

theory to vertebrates, claiming that the *zoonites* became more firmly connected and grouped themselves into tissues and organs to permit specialization of function. Thus E. Perrier put forward a colonial theory of three levels. 'The higher animals, or *zoïdes*, were societies of *mérides*, which in their turn were societies of *plastides*. If we could count the *plastides* of an organism and know their respective positions, properties and relationships, not only would we know all the functions of the organism, but we could retrace its embryological development and predict its future.'¹

Bernard laid emphasis upon this autonomy of the cellular elements, but he emphasized no less 'the subordination of the elements to the whole'. He regarded the 'morphological plan', or the 'directing idea' as of primary importance. He gave a typical example. If the metatarsal bone is removed from a young rabbit and grafted under the skin on the animal's back, it continues to live and grow, but not for long. Soon it is resorbed, while a new bone grows in the place assigned to it in the morphological plan. Thus the cell has autonomy, but this autonomy is relative and subordinated to the needs of the organism. 'It is the subordination of the parts to the whole that makes of the complex individual a connected system, an individual. It is this that maintains the unity of the living thing.'²

In reaction against mechanism, contemporary biologists³ have rejected the equilibrium which Bernard postulated between these two factors, and have placed the emphasis on the directing plan. This new attitude, which is also found in psychology, tends to substitute the idea of 'the whole' for the idea of 'the association' in the phenomena of life. This marks the downfall of the colonial theory of the individual in biology.

319 *Associations of Living Things*

Although the colonial theory is inadequate to explain the strict organization of individuals in the higher species, it retains its value in many cases where there is an obvious association. Among certain plants and animals, it is possible to see that complex individuals are

¹ Ed. Perrier, *La philosophie zoologique avant Darwin*, p. 241.

² C. Bernard, *Leçons sur les phénomènes de la vie*, pp. 355 to 368.

³ The most distinguished supporters of the theory of 'the whole' or 'totality' are H. Höfding the psychologist and H. Driesch the biologist. We should pay special tribute to the latter, who gave psychical research a place in his philosophy. (Cf. his important book *Die Philosophie des Organischen* and his article 'Les phénomènes métapsychiques au point de vue biologique.' *Revue Métapsychique*, 1924, I.)

really formed by an agglomeration of simpler individuals. Then a *coenobium* is formed (as with the infusoria, polyps, ascidians, etc.). In symbiosis we see association formed 'for life' between different individuals. A lichen, formed by the association of an alga and a fungus, as the characteristics of a plant. If we include the psychic factor in our definition of life, as did Claude Bernard, we find in nature associations of individuals which behave like a superior individual. Modern ideas of 'the whole' and of a directing idea are as applicable to them as to individuals in biological continuity with one another.

These cases, which are closely related to psychical research, were studied by the philosopher Espinas at the end of the nineteenth century.¹ According to him animal associations cannot be ascribed to mechanical causes; they imply the workings of an intelligence — we should say a psychism. An individual progresses in becoming an organ in a more extended individual. The study of insects which live in communities shows that these organs may be separated in space without losing the bond which makes of them a superior individual, a 'superindividual'. Espinas speaks of the fusion of individual consciousnesses into a collective consciousness, but the word 'consciousness' is borrowed from ordinary psychology. It can be retained if we accept that this consciousness may be 'subconscious' and yet related to intelligent actions. The work that has been done on the subconscious in the last three-quarters of a century provides sufficient explanation of this apparent contradiction.²

320 *The Colonial Insects*

The insects which live in colonies, such as bees, ants, and termites, offer the most striking example of permanent collective psychism, analogous to the temporary form we have observed in psychical phenomena. These insects live in family societies. In most species the colony, which may contain more than a hundred thousand members, is descended from a single queen, and always, as with the ants, from a small number of queens. Except among the termites, where there is a king as well as a queen, the males fulfil only a reproductive role and are then sacrificed. The most characteristic feature of these societies is a rigorous division of labour which

¹ *Des sociétés animales*, Germer, Baillière, Paris, 1878.

² For the development of this theme see the author's *Nouvelles Enigmes de l'univers*, a whole chapter of which is devoted to the question 'Is there a collective soul?'

excludes any individual initiative unrelated to the social function. This function is also served by differing anatomical organs. But the true organs of the community are the individuals themselves who, while appearing autonomous, carry out the aims of the super-individual. This superindividual may be more or less intelligent, that is to say, may make more or less efficient use of the circumstances in the environment to attain the collective goal. In this respect the ants, which are more rigidly subordinated to instinct, are superior to the bees.

This concentration of functions is narrowest among the termites. Even the architecture of the nest suggests comparison with a living organism. It is analogous to a body covered with a skin, which the workers repair as soon as it is broken. All these characteristics are inexplicable in terms of the biology of association. The living society is here much more than the sum of its members. It obeys constitutional laws of a psychic nature, in accordance with the profound intuitive insight of Lamarck and Schopenhauer.

William Mackenzie, developing the ideas of Durand de Gros, emphasized the universality of the polypsychic phenomenon in nature.¹ He showed that it occurred as low in the scale of life as the unicellular flagellated algae. He also drew attention to the resemblance between this elementary psychic phenomenon and the phenomenon of table-turning, in which human psyches are temporarily in association.

321 *The Laws of Sociology*

Among living things the superindividual is strongest in communistic societies. Often a large number of animals of the same, or even of different species, live in association, obeying a collective law to which all their individual actions are subordinated. As there is no question of conscious and voluntary associations, we must regard this as evidence of psychism. In this way flocks are formed for migration or for defence against enemies. The phenomena of 'crowd psychology' among human beings, in which the most primitive emotions seem to function, are recognized. They have been compared with the phenomena of pathological hysteria, which indicates their subconscious character and relates them to psychical phenomena.

¹ *Metapsichica moderna*, op. cit., p. 276. Cf. also Mackenzie's paper at the Utrecht Conference, 'Les racines biologiques de la parapsychologie'.

The distinctive and perhaps superior characteristics of the association have been made the subject of a human science, Durckheim's sociology. This does not take psychology into account, but observes objectively that societies, seen from the outside, obey laws which are not explained by the relations between individuals. Without giving the name of superindividual to the social group, we recognize its totalitarian character, which differentiates it profoundly from a sum of individuals. Durckheim has been criticized for the mystical nature of his ideas, which easily lends itself to a Hegelian deification of the State. But he merely systematized in a scientific manner a set of facts, the true significance of which is seen in the light of psychical research.

III. IDEOPLASTY, PURPOSIVENESS AND MIMESIS

322 *Purposive Biology*

We have already seen that the phenomena of teleplasty, which biologists are unwilling to accept because of the challenge they seem to offer to the determinism of physiological laws, may be called 'ideoplastic' because they obey a subconscious idea. Thus they show purposiveness no less than all the other phenomena of life. The difference is that the purposiveness shown in the latter is long-term and shows itself in the progressive developments of evolution, while in the former the action is as rapid as that of the voluntary movements; the form created fulfils a need to seize an object, move something or show a face. In the normal as in the paranormal case the will shown originates in an intention.

Biologists have been slow to recognize the inadequacy of mechanistic theories but the greatest of them, including Lucien Cuénot of France, have held theories of purposiveness.¹ It is absurd to suppose that the organs of living creatures, which are sometimes very complicated, could be formed by a combination of chance and selection. As Schopenhauer perceived, organs are tools which serve certain needs. The need creates the organ, said Lamarck, although he could not explain in physical terms how this process could take place. Psychical research helps us here.

Cuénot and his pupil Mlle Tétrý drew up an inventory of organic creations in the animal kingdom which were apparently of psychic

¹ Lucien Cuénot, *Intention et finalité en biologie*, Flammarion, Paris, 1941.

origin.¹ A similar inventory should be made for the vegetable kingdom, in which the technical invention shown is no less remarkable. 'Purposiveness characterizes biology,' said Charles Richet. 'All living things, from man to the simplest cell, show signs of psychic functions,' wrote a learned Austrian botanist, Adolf Wagner.² Cuénot, repudiating his earlier mechanistic ideas, declared that he had come to believe in, 'a spiritual inventive power, immanent or living, which acts upon matter as the idea of a craftsman acts upon the materials he is using'.

323 *The Riddle of Mimesis*

To complete our demonstration of the spiritual power spoken of by Cuénot, we shall refer to the facts of mimesis which have never been satisfactorily explained by the naturalists. Paul Vignon, having published in the *Archives du Muséum* a magnificent album on the leaf-grasshoppers of South America, declared that these phenomena of imitation, often very precise, between different species showed the existence of ideas throughout the zoological scale, from infusoria to human beings.³ This imitation of one species by another usually shows purposiveness; it has a protective use, as the species which mimics is weaker and less well protected than the species mimicked, which has less to fear from predators.

The protective camouflage may make use of colour only. The species takes on the colour of its habitual surroundings, earth, grass or foliage. On burnt ground or in industrial areas the insects are blackish and certain acridians even assume green stripes at the time when new shoots begin to grow. Deep-sea fish are invisible. Molluscs living on sponges are yellow or red. Many pelagic animals are transparent. Sometimes the camouflage is rendered more effective by other expedients.⁴

It is imitation of form which produces the most remarkable effects. Animals copy bark, twigs, grasses, fruits, leaves, and even seeds. A certain sting-fish looks like a bundle of seaweed. The orthopteran insects are the cleverest mimics. There are Indian mantises which reproduce the delicacy of a flower. The Kallimas

¹ Andrée Tétty, *Les outils chez les êtres vivants*, Gallimard, Paris, 1948.

² Adolf Wagner, *Das Zweckgesetz in der Natur*, Zurich, 1923. Cf. also, by the same author, *Die Vernunft der Pflanzen*.

³ Paul Vignon, *Introduction à la biologie expérimentale*, Paris, Lechevallier, 1930.

⁴ Lucien Chopard, *Le mimétisme*, Payot, Paris, 1950.

butterflies and the South American grasshoppers provide perfect reproductions of leaves, sometimes spotted with blight or nibbled. Sometimes the imitation is harmful to the creature when it has proceeded too far and exceeded its aim. But the origination of these phenomena is none the less of the psychic order and shows the workings of mind.

324 *The Ideoplastic Hypothesis*

Easy as it is to state the facts of mimesis, and even to suggest a psychic explanation of them, it is difficult to suggest how they originated. The science of biology is no wiser when it ascribes a new species to the mutation of a hereditary gene. How can an alteration in the chemical composition of this particle produce a change in the characteristics of the living creature? One could accept this for slight changes within a species, but when one thinks of the miracles of evolution that have produced instruments so complex as the eye, or changed a limb for walking into one for flying, imagination fails. But it is evident that the new organ corresponds to an idea, itself the result of a need — the need to see or to fly. These organs could not be made by successive modifications; either they were made at once to fulfil their role, or if they were made progressively it was in accordance with a plan.

The same is seen to be true of the phenomena of mimesis. They are the result of an idea, which shows that the psychic controls the whole of nature and not only human life. Exceptional cases of ideoplasty occur among animals, as rarely as they do among humans. A striking example is that of the cat at Nice who gave birth in 1921 to a kitten bearing the date of the year on its front.¹ The figures were formed by groups of black hairs on a white background. Investigations made by a vet and other witnesses of integrity revealed that during gestation the cat had spent hours watching for rats hidden from her by a sack bearing this date. The three stars printed above it appeared as spots on the kitten's fur. This case is as difficult to explain as that of the grasshopper whose wings resemble leaves. At the most one can say that the former was a kind of individual *lusus*, while the latter was conserved in the species because of its protective value.

¹ Cf. *Revue Mitopsychnique*, I, 1922.

IV. SPIRITUAL PROGRESS OR REGRESS?

325 *The Subliminal Self*

F. W. H. Myers was the first, and is still almost the only psychologist to have attempted a synthesis of the facts of psychical research. As Flournoy showed, this synthesis was unfortunately dominated by religious inclinations, and its influence has vitiated metapsychic philosophy until the present time — see, for example, Geley's work.¹ But it is possible to extract from it a new and important psychological theory — that of the *subliminal self*. This theory co-ordinated all the facts connected with the unconscious life of the mind and William James demanded that the problem stated by it should be known henceforward in the history of science as Myers's Problem.

The facts of somnambulism, disintegration of personality, automatism, hysteria, etc., had shown for a long time that the unconscious mind was not merely physiological, but that it was also necessary to accept the existence of an unconscious mental activity, often personal in form, or, to avoid the apparent contradiction of terms, a 'subconscious' activity. Borrowing the expression created for the needs of psycho-physiology, 'the threshold of consciousness', Myers distinguished between a supraliminal self and a much more extensive, and in many respects superior, subliminal self. The conscious personality is only a fragment of the whole self, the part used in practical activity. Myers compares it to the visible part of a solar spectrum. The subliminal self corresponds to the invisible part of this spectrum, the infra-red representing the organic functions and the ultra-violet the highest psychic functions, such as are shown in genius and ecstasy, and in the phenomena of psychical research.

The two selves, or rather the two parts of the whole self are separated by a 'psychic diaphragm', across which exchanges take place continually in normal life. But it may happen that the diaphragm is too permeable and permits to pass, in one direction or the other, elements which cause a psychological disturbance, or psychosis. The subliminal mind, as is shown by the analogy of the spectrum, is far from homogeneous. It forms layers and strata and even personalities based on isolated psychological elements; hence simultaneous or alternating personalities. It also functions in a 'metaetheric world' in which are produced the phenomena of

¹ Cf. Sudre's paper on 'La philosophie de Geley', *Revue Métapsychique*, V, 1924.

telepathy and telaesthesia. In this supra-sensible world the mind acts autonomously, free from the limitations of organic life. This independence, observed with living subjects, seemed to Myers presumptive evidence of survival. But the crucial proof is given by the class of phenomena which we have studied under the name of telepathic hallucinations. Telepathy of the dead is a logical extension of telepathy of the living.

326 *Myers's Prejudice*

Thus Myers had not disregarded the facts established by the psychiatrists. He expressly declared that it was no longer possible to retain the old concept of the indivisibility of the self. He rejected also the opinion, held at the time by Ribot among others, that the self was a co-ordination under the control of biology. He suggested a third solution, based on experience rather than theory. Accepting the theory of evolution, he regarded the human personality as 'an aggregate of countless smaller psychic entities each of which retains its own characteristics, restricted by a larger psychic entity, pre-existent or not, which unifies them without however always exercising complete control over them. The control may fail completely and then groups of psychic elements may become isolated as obsessions, which are real 'tumours of the mind'. This is the beginning of hysteria. The obsessional idea forms the nucleus of a secondary personality which has a life of its own alongside the principal personality and may overthrow it by a kind of *coup d'état*. Sometimes this new personality may be superior to the original one, which does not disappear but remains beneath the threshold of consciousness, where it may be reached by hypnosis.

Thus Myers saw division of personality from the point of view of experimental psychology. The hypothesis he introduced was that of the fundamental unity of the personality itself. For Myers, the reality of the great human 'I' was a consequence of survival, which he believed to be established by the facts of psychical research. By demonstrating, as we have done, that what is proved by psychical research is, at most, the survival of a memory without any potentiality of action unless it is revived in an incarnate mind, the fundamental hypothesis of Myers is destroyed. Nor could it survive the recognition that the psychic faculty is not the distinctive crown of the human race, as he believed, but an extension of a faculty found throughout nature.

327 *Universal Animism*

The study of the ascent of life, as understood by certain scientific philosophers, is misleading because it considers higher forms to be composed of the simplest elements. They fail to see that quantitative complexity conceals an emergence of new characteristics which do not necessarily derive from any which preceded it. But if the higher characteristics, those of the mind, are placed at the origin of life, this study becomes genuinely fertile. In the form of a psycho-biological theory¹ it extends the spiritual principle to all living creatures in accordance with the great experimental theory of evolution. From the highest reaches of man's intelligence and psychic intuition to the most elementary vital functions of plants there is no real discontinuity. The spiritual impregnates all organisms. An individual is a psychic whole as he is a physical whole. But this whole can divide to form other wholes, and this is the central point of a true theory of personality. The divisibility of the soul, pointed out by Stahl, is a fact which is proved by biology before being confirmed by psychical research. It is established by the phenomena of regeneration and of propagation by cuttings, in which an individual is mechanically transformed into two individuals of the same form and functions. How could we explain the phenomena of generation proper without this fact?

Consider the case of asexual reproduction. A strawberry plant grows a stolon. After some time another strawberry plant grows at the end of this stem and the stolon withers so that the two plants are independent. Biologists say that they are both the same plant, but this seems to us an ambiguous expression because there are henceforward two completely independent individuals which follow different life histories although having the same heredity. In any case the soul (in the diminished sense which we give to the word as we descend the scale of life) of the second strawberry plant derives from the first; it is the same in the parthenogenesis of greenflies. In the case of sexual reproduction where two gametes fuse, the soul is the result of a fusion of spiritual elements from the combining souls. It begins then with the body of which it is the individuating principle and disappears with it, except by its memory function. This perfect

¹ See in this connection the works of the philosopher Ruyer of Nancy, and in particular his *Éléments de psycho-biologie*, Presses Universitaires de France, Paris, 1946, cf. also the same author's *Neo-finalisme*, 1952.

parity of body and soul—not parallelism, but interaction—permits the psychological personality to be understood in a way which avoids the difficulties on which both materialistic and classical spiritualist doctrines have come to grief.

328 *A Legacy From the Past*

Even more clearly than the biologists with their ancestral trees, Bergson pointed out¹ the two divergent directions taken by life in the course of animal evolution: that of the vertebrates, characterized especially by the development of intelligence; and that of the arthropods, characterized by instinct. This does not mean that intelligence and instinct have not each conserved some trace of their common origin. Intelligence is the faculty for making artificial tools adapted to conscious needs, while instinct uses parts of the body for its needs. It is difficult to understand how this physiological intelligence can produce results so marvellously adapted to the habits of the animal.

Psychic phenomena are related to the workings of instinct. They show powers more primitive than intelligence and in some ways superior. Intelligence did not produce the adaptation of flowers to insects, mimicry, the direction-finding sense of animals, the fertilization organs of plants, or the infinite diversity of organic mechanisms with which even the most rudimentary creatures feed, defend themselves or attack. We are astonished by the 'second sight' of our subjects while many animals act efficiently without a sense of sight. We find it difficult to accept telepathy. Misled by the workings of intelligence, we have to assume waves and intangible material mediums, although in animal communities communication takes place without any visible or even imaginable signal. Nature has anticipated even the most abstract operations of arithmetic and geometry. The miracles of our parapsychology are reflected everywhere among the lower forms of life, where our sense of familiarity prevents them from astonishing us.

Who can fail to see the confusion that must result from relating metapsychics solely to the human race, among whom it represents only that fringe of primitive instincts which surrounds the activity of normal consciousness? It is regarded as a peak of nature's achievement, a preparation for the Superman, an approach to divinity, a promise of immortality. This was Myers's mistake, and it is the

¹ 'L'Évolution créatrice', op. cit., p. 145 et seq.

constant mistake of many other psychical researchers. Rhine, recognized as the leader of a new school of science destined to convince the world by the perilous methods of statistics, falls himself into this Anglo-Saxon eccentricity which will go to any lengths to make science blossom into morality and religion. 'Without much difficulty,' he writes, 'most of the essential dogmas of religion can be translated into problems in experimental parapsychology.'¹ If, on the contrary, parapsychology is viewed in its true setting, which is nature as a whole, it will be suspected that the place allotted to it by Rhine is fallacious. Fleeting human faculties such as clairvoyance and teleplasty merely confirm the validity of psychobiology and destroy mechanistic and materialistic theories. They are not an inheritance reserved for the king of the planet, but a legacy from the past, as is also shown by psychoanalysis with its study of the mental reactions of its patients.

329 *The Problem of Survival*

Returning to the disconnected but genial utterances of Lamarck, biology teaches us that life is nothing but psychism. But why should this psychism in animals and plants have been strictly confined to practical activity in the struggle for life, while in man it was suddenly enormously developed, so that he abandoned earthly needs to a great extent in order to participate unconsciously in another life, a 'meta-etheric' life of which nothing is known, least of all what purpose it might serve. This flight of fancy seems to exceed the limits permitted to a philosopher. Spiritualists who do not wish to break with psychology, such as the Bergsonian spiritualists, are obliged to admit that there is nothing in the human mind which indicates that it is made for knowing. On the contrary, everything suggests that it is made for action. So experienced a psychologist as P. Janet declares that 'a scientific study of psychology can only be made if all mental phenomena are considered as actions or as grades of action'.² Mental illnesses would thus constitute a loss of the sense of reality, a lowering of the tension necessary for adaptation to life. One might contest this primacy of action and place slightly more value on disinterested thought, without implying by this that the human spirit has other qualities eliminated by evolution and realized without its knowledge on another plane of existence. Psychical research does not justify us in making this leap into mysticism.

¹ 'The Reach of the Mind', op. cit.

² *Les médications psychologiques*, Part I, p. 208.

The great question, which was prejudged by Myers, is: what becomes of personality at the death of the organism? We accept the survival of memory, but even supposing that this is not an inert collection of stereotyped ideas, but retains some remnant of dynamism, this is not sufficient to constitute a genuine personality. Deprived of its physical supports it is no more than a shadow which perhaps fades and disintegrates in a short time. To reconstruct it, a living organism is necessary — a medium. This theory accounts so well for the characteristics of mediumistic impersonations that it suggested to William James the idea of a common reservoir of consciousness in which all the memories of the world are stored. But it is difficult to think profitably about speculations so far removed from experience. The essential thing is to understand that in the domain of life, which is the domain of mind, there are only more or less stable unities, which tend to divide to produce new unities. The drop of mercury, which scatters into infinitely many equally round drops, is the best symbol for this aspect of the creative activity of Nature. Why should Nature be so interested in multiplying and renewing individuals if they were to be immortal?

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